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ABSTRACT

A job analysis was conducted of the knowledge and skills important for the competent performance of beginning business education teachers. The results of this job analysis will be used to define the content domain of the subject assessment in Business Education for the Praxis Series of professional assessments for beginning teachers. A domain of 207 important knowledge and skill statements was developed by subject-matter experts. These statements were then incorporated into a survey completed by over 1,000 business education teachers, administrators, and teacher educators. These business education professionals rated the knowledge and skill statements using a five-point scale. Statements were then judged to have a mean importance rating equal to or greater than 2.5 (midpoint of the scale) were considered eligible for inclusion in the subject assessment. Of the 207 knowledge statements and skill statements, 17 had mean ratings of less than 2.5 across all groups. Emphasis in test development should be placed on the 190 knowledge or skill statements that passed the 2.5 cut point. Six tables present study findings, and seven appendixes contain supplemental information. (Contains 16 references.) (Author/SLD)

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RESEARCH REPORT

DEFINING THE CONTENT DOMAIN FOR THE PRAXIS II SUBJECT ASSESSMENT IN BUSINESS EDUCATION: A JOB ANALYSIS FOCUSING ON KNOWLEDGE AND SKILLS

Richard J. Tannenbaum

Educational Testing Service
Princeton, New Jersey
November 1994

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Defining the Content Domain for the Praxis II Subject Assessment in Business Education: A Job Analysis Focusing on Knowledge and Skills

Richard J. Tannenbaum
Division of Applied Measurement Research

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Table of Contents

List of Tables iii
Abstract 2
Introduction 3
Purpose of the Study 3
Objectives of the Study 4
Method 4
Overview 4
Building of Draft Domain of Knowledge and Skills 5
Review of Draft Domain by External Review Panel 5
Advisory/Test Development Committee Meeting 6
Job Analysis Survey 7
Administration of the Job Analysis Survey 8
Analysis Plan 8
Primary Analyses 8
Cut Point of Mean Importance 9
Secondary Analyses 10
Results 10
Survey Respondents 10
Response Rate 10
Demographic Characteristics 10
Importance Ratings: Analysis of Means 10
Aggregate of Survey Respondents 10
Teachers, Administrators, and Teacher Educators 10
Subgroups of Survey Respondents 13
Importance Ratings: Correlational Analyses 13
Teachers, Administrators, and Teacher Educators 13
Subgroups of Survey Respondents 13
Mean Ratings of Content Coverage 13
Mean Ratings for Content Emphasis 16
Summary and Conclusion 16
References 18

Appendix A: External Review Panel A1

Appendix B: Advisory/Test Development Committee Members B1

Appendix C: Job Analysis Inventory C1

Appendix D: Inventory Cover Letter D1

Appendix E: Respondent Demographics E1

Appendix F: Mean Importance Ratings: Teachers, Administrators, and Teacher Educators F1

Appendix G: Mean Importance Ratings: Race/Ethnicity, Sex, Geographic Region, and Teaching Experience G1

List of Tables

Table 1: Mean Importance Ratings for Major Content Areas -- Teachers, Administrators, and Teacher Educators 11

Table 2: Knowledge or Skill Statements Rated Below 2.50 -- Teachers, Administrators, and Teacher Educators 12

Table 3: Knowledge or Skill Statements Rated Below 2.50 -- Subgroups 14

Table 4: Correlations of the Profiles of Mean Importance -- Subgroups 15

Table 5: Mean Ratings of Content Coverage -- Teachers, Administrators, and Teacher Educators 15

Table 6: Mean Ratings of Content Emphasis -- Teachers, Administrators, and Teacher Educators 16

Abstract

The purpose of this study was to conduct a job analysis of the knowledge and skills important for the competent performance of beginning business education teachers. The results of the job analysis will be used to define the content domain of the Subject Assessment in Business Education for the Praxis Series: Professional Assessments for Beginning Teachers®.

A domain of 207 important knowledge statements and skill statements was developed by subject-matter experts. These statements were then incorporated into a survey that was administered to a large number of business education teachers, administrators, and teacher educators. These business education professionals rated the importance of the knowledge statements and skill statements using a 5-point scale. The survey component functioned as an independent verification or refutation of the importance of the statements defined by the subject-matter experts. Statements that were judged to have a mean importance rating equal to or greater than 2.50 (midpoint between moderately important and important) by all groups (teachers, administrators, and teacher educators) and all subgroups (race or ethnicity, sex, geographic region, and teaching experience) of survey respondents were considered eligible for inclusion in the development of the Subject Assessment in Business Education.

The results indicated that of the 207 knowledge statements and skill statements, 17 (8%) had a mean rating of less than 2.50 across all groups and subgroups of survey respondents. It is recommended that these 17 statements not be included in the development of the Subject Assessment in Business Education. Primary emphasis, in the test develop process, should be placed on the 190 knowledge or skill statements that did pass the 2.50 cut point.

Introduction

The Praxis Series: Professional Assessments for Beginning Teachers® offers assessments for each stage of the beginning teacher's career, from entry into teacher education to actual classroom performance (Educational Testing Service, 1992). The Praxis Series can be used by state agencies as one of several criteria for initial teacher licensure. The subject assessments for The Praxis Series are designed to assess a teacher candidate's subject-matter knowledge and, where appropriate, knowledge about and skills for teaching that subject matter. These assessments are based, in part, on the premise that competent beginning teachers should demonstrate an understanding of the subject matter they intend to teach (Grossman, Wilson, & Shulman, 1989) and demonstrate knowledge of teaching principles and strategies specific to the subject matter (Grossman, 1989; McDiarmid, Ball, & Anderson, 1989; Reynolds, 1992).

The Subject Assessment in Business Education offers a multiple-choice core test and one or more candidate-constructed-response modules. The optional modules include Content Area Performance Assessments that allow candidates to demonstrate in-depth understanding of business education and Content-Specific Pedagogy modules to demonstrate knowledge and skills related to teaching business education.

Purpose of the Study

The purpose of this study was to conduct a job analysis focusing on the knowledge and skills important for beginning business education teachers. The results of the job analysis will be used to define the content domain of the Subject Assessment in Business Education. Because validity inferences associated with licensure (and certification) tests are based primarily on content-related evidence, the inclusion of a well-designed job analysis in the test development process is essential (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1985).

Job analysis refers to procedures designed to obtain descriptive information about the tasks performed on a job and/or the knowledge, skills, and abilities thought necessary to perform those tasks (Arvey & Faley, 1988; Gael, 1983). The specific type of information collected for a job analysis is determined by the purpose for which the information will be used. For purposes of developing licensure (and certification) tests, a job analysis should identify the important knowledge, abilities, or skills necessary to protect the public--interpreted as the importance of the test content for competent performance in an occupation (American Educational Research Association et al., 1985). In addition, it is recommended that a job analysis include the participation of various subject-matter experts (Mehrens, 1987) and that the information collected be representative of the diversity within the occupation (Kuehn, Stallings, & Holland, 1990). Diversity refers to regional or job context factors and to subject-matter-expert factors such as race or ethnicity, experience, and sex. The job analysis conducted to support

the content-related validity of the Subject Assessment in Business Education was designed to be consistent with the *Standards for Educational and Psychological Testing* (American Educational Research Association et al., 1985) and current professional practice.

Objectives of the Study

The objectives of this study were: (a) to have subject-matter experts construct a domain of knowledge and skills that they believed was important for the competent performance of beginning business education teachers; and then (b) to have a national sample of business education professionals (i.e., teachers, teacher educators, and state administrators) verify or refute the importance of the knowledge statements and skill statements that constitute the domain. The verification/refutation objective is accomplished through the administration of a job analysis survey and serves as an independent check, by a wide range of professionals, on the relevance of the domain to the competent performance of a beginning business education teacher. This independent check reduces the likelihood that unimportant knowledge statements and skill statements will be included during the development of the Subject Assessment in Business Education. Statements that are verified to be important may be used in the development of the Subject Assessment in Business Education.

Method

Overview

The methodology consisted of defining the knowledge and skills important for beginning business education teachers to perform their jobs in a competent manner. This was accomplished by having subject-matter experts define knowledge content areas and skill content areas and knowledge statements and skill statements within each content area, and then by presenting these judgments for verification or refutation through a national survey of business education professionals. The verification/refutation aspect of the survey approach functions as a "check and balance" on the judgments of the subject-matter experts. The survey participants were business education teachers, teacher educators, and state administrators. The names of the teachers and teacher educators to be asked to complete the survey were obtained from the database maintained by Market Data Retrieval Services (MDRS), a survey research organization. This database contains the names of over 90% of all public school teachers and teacher educators in the United States. The names of the state administrators were obtained from the membership directory of the National Business Education Association. The survey participants were asked to rate the knowledge content areas, skill content areas, and the knowledge statements and skill statements in terms of their importance for the competent performance of beginning business education teachers. The specific steps in the job analysis process are described below.

Building of Draft Domain of Knowledge and Skills

The first step in the job analysis was to construct preliminary knowledge content areas and skill content areas and knowledge statements and skill statements. This draft domain would function as the initial definition of knowledge and skills important for the competent performance of beginning business education teachers. The draft domain was constructed by Educational Testing Service (ETS) Test Development staff with subject-matter expertise in business education and ETS Research staff with expertise in job analysis. In the process of developing this draft, the ETS subject-matter experts reviewed NTE business education test specifications, state licensure requirements, and relevant professional literature. In addition, the ETS Research staff conducted field interviews with two business education teachers, one from New Jersey and the other from Pennsylvania. These teachers were asked to identify knowledge and skills important for beginning business education teachers.

The draft domain for business education consisted of 13 content areas partitioned into various subareas and 216 knowledge statements and skill statements. The content areas were: (a) Economics, (b) Marketing, (c) Business Law, (d) Business Organization and Management, (e) Finance, (f) Business Math, (g) Accounting/Bookkeeping, (h) Office Technology, (i) Data Processing, (j) Office Procedures, (k) Business English/Business Communication, (l) Career Education/Vocational Education, and (m) Pedagogy Specific to Business Education.

Review of Draft Domain by External Review Panel

After the draft domain was constructed, it was mailed to a panel of five external subject-matter experts, three secondary school teachers, and two teacher educators (see Appendix A). The panel members were identified by the ETS Test Development staff. The panelists were selected for their content expertise, their involvement with teacher education and development, and for their diversity with respect to race or ethnicity, sex, and geographic region.

The purpose of the External Review Panel was to critique the draft domain in terms of: (a) the appropriateness of its overall structure (defined by the 13 major content areas) and (b) the appropriateness of the specific knowledge statements and skill statements in terms of their relevance to the competent performance of beginning business education teachers. The panelists were asked to recommend specific modifications to the domain (i.e., additions, deletions, reorganizations, wording changes) so that it reflected what they believed to be a domain that sufficiently covered the knowledge and skills important for beginning business education teachers.

The recommendations of the panelists were obtained via telephone interviews conducted by ETS Research staff. The individual recommendations were compiled and presented as an additional source of information during the Advisory/Test Development Committee meeting (see below). The recommendations focused primarily on making wording changes to clarify meaning. Additionally, some statements were targeted for deletion either because they were believed

to overlap with other statements or because they were not believed to be relevant to the competent performance of a beginning business education teacher; very few additional knowledge statements or skill statements were recommended.

Advisory/Test Development Committee Meeting

Evidence in support of content-related validity is enhanced by the inclusion of large numbers of subject-matter experts who represent the relevant areas of content expertise (Ghiselli, Campbell, & Zedeck, 1981). This job analysis study was designed, therefore, to obtain input from many subject-matter experts throughout the domain definition process. In addition to the External Review Panel, an Advisory/Test Development Committee of six business education professionals--three teachers, two teacher educators, and one administrator--was formed (see Appendix B). This committee also had representation by race or ethnicity, sex, and geographic region.

The purpose of this committee was similar to that of the External Review Panel--to critique the draft domain in terms of the appropriateness of its overall structure and the appropriateness of the knowledge statements and skill statements. The committee members were asked to revise the domain consensually (to add, delete, or reorganize content, and to make wording changes) so that it reflected what they collectively believed to be a domain that covered the knowledge and skills important for beginning business education teachers. The committee members also reviewed and approved the rating scale of importance to be used in the national survey as well as the biographical information that would be asked of the survey participants. The biographical data are used to describe the composition of the business education professionals who return usable surveys and to permit the analysis of the judged importance of the knowledge statements and skill statements by various subgroups of business education professionals (e.g., males and females).

The revision of the draft domain occurred during a three-day meeting. The meeting was led jointly by ETS Test Development and Research staff. (Prior to the meeting, the committee members were mailed copies of the draft domain to review. The members were informed about the purpose of the meeting and were asked to come prepared to discuss their reviews of the draft domain.) A computer was used during the meeting to make on-line changes to the domain as discussion occurred (at appropriate points of discussion the compiled recommendations of the External Review Panel were presented). A projection of the revisions onto a large screen facilitated the revision process and helped to ensure the accuracy of the revisions. The revised domain consisted of 207 knowledge statements and skill statements clustered within 12 content areas; the content areas Office Procedures and Office Technology were combined into one area, Office Technology and Procedures; Data Processing was changed to Information Processing; and Career Education/Vocational Education was changed to Vocational Education.

Approximately four days after the meeting was concluded, the revised domain, in complete survey format, was mailed to each of the committee members for approval. With the exception of some minor word changes, no modifications were suggested.

Job Analysis Survey

As described previously, a job analysis survey was included to serve as an independent verification or refutation of the judgments of the subject-matter experts. The use of a survey facilitates obtaining judgments of domain importance from large numbers of business education professionals. And, basing test content decisions on these collective judgments reduces the likelihood that unimportant knowledge statements and skill statements will be included in the development of the Subject Assessment in Business Education. The use of a survey also helps to reinforce the fairness and relevance of the test content to the diversity of teacher candidates. This is accomplished by computing mean importance ratings by different groups (e.g., teachers and teacher educators) and subgroups (e.g., race or ethnicity and sex) of survey respondents. Knowledge statements and skill statements judged to be important by all groups and subgroups are targeted for inclusion in the Subject Assessment in Business Education.

The job analysis survey (see Appendix C) consisted of three parts. Part I included the 12 content areas and 207 knowledge statements and skill statements. Respondents were asked to judge the importance of the 12 major content areas and each of the 207 statements, using a 5-point scale:

> How important is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?
>
> (0) Of no importance
> (1) Of little importance
> (2) Moderately important
> (3) Important
> (4) Very important

This rating scale is consistent with the guidelines of the *Standards for Educational and Psychological Testing* (American Educational Research Association et al., 1985) for defining content domains for licensure tests and is consistent with accepted professional practice.

Part I also allotted space for survey respondents to add knowledge or skill content areas as well as knowledge or skill statements that they believed should be included in the domain. In addition, the respondents were asked to rate how well the knowledge or skill statements within a major content area covered the important aspects of that major content area. This provided an indication of content coverage. The rating scale was anchored by the following five points: (1) Very Poorly, (2) Poorly, (3) Adequately, (4) Well, and (5) Very Well.

In Part II of the job analysis survey, the respondents were asked to indicate the relative weight that each of the 12 major content areas should receive (content emphasis) in the Subject Assessment in Business Education. This was accomplished by their distributing a total of 100 points across the major content areas. These point distributions are converted into percentages, representing the percent of items that the survey respondents believe should be devoted to each area.

Part III was the background information (biographical data) section. The survey respondents were asked to answer several questions that described their demographic makeup (e.g., teaching experience, age, sex, race or ethnicity). This information was used to describe the survey respondents and to perform relevant subgroup analyses.

Administration of the Job Analysis Survey

The job analysis survey, accompanied by a letter of invitation to participate (see Appendix D for a copy of the letter), was mailed to a random sample of 1,023 business education professionals: teachers (n = 663), teacher educators (n = 306), and state administrators (n = 54). These distributions represent the selection of 13 teachers, 6 teacher educators, and 1 state administrator for each state and the District of Columbia. (Two state administrators were selected, however, from Texas, Virginia, and Oklahoma. This was consistent with the number of state administrators acknowledged as representing these three states.) The teachers and teacher educators were randomly selected from the data base maintained by Market Data Retrieval Services (MDRS), a survey research organization. This data base contains the names of over 90% of all public school teachers and teacher educators in the United States. The state administrators were obtained from the membership directory of the National Business Education Association. Approximately one week after the surveys were mailed, a follow-up postcard was mailed to all the business education professionals reminding them to complete and to return their job analysis surveys.

Analysis Plan

Primary Analyses

Mean importance ratings and correlations of the profiles of mean importance ratings were to be computed by different groups (teachers, administrators, and teacher educators) and subgroups (race or ethnicity, sex, geographic region, and teaching experience) of survey respondents to support the development of the Subject Assessment in Business Education. To be included in these analyses, however, each group and subgroup was required to have at least 30 respondents (e.g., ≥ 30 teacher educators, ≥ 30 females). This minimal number is necessary, according to Walpole (1974), to increase the probability that the computed mean values are accurate estimates of the corresponding population mean values.

The computation of means is used to determine the absolute level of importance attributed to the knowledge statements and skill statements by the survey respondents. The mean analysis is used to establish a cut point (discussed below) to differentiate between important and unimportant knowledge statements and skill statements. It is with respect to this cut point that test content inclusion decisions are made. Statements for which the mean importance rating meets or exceeds the cut point value for all groups and subgroups of survey respondents are considered for inclusion in the development of the Subject Assessment in Business Education.

The correlational analysis is used to determine intergroup (e.g., teachers-teacher educators) and intrasubgroup (e.g., male-female) agreement with respect to the relative importance of the knowledge statements and skill statements. Relative importance refers to the similarity in the profiles of mean importance ratings generated by the different groups and subgroups of survey respondents.

Cut Point of Mean Importance

Since the purpose of job analysis is to ensure, to the extent possible, that only the more important knowledge statements and skill statements are included in the development of the Subject Assessment in Business Education, a cut point for content inclusion needs to be established. Previous job analysis studies (Reynolds, Tannenbaum, & Rosenfeld, 1992; Tannenbaum, 1992a, 1992b) that similarly defined content domains for other Praxis Series subject assessments used a cut point of a mean importance rating of 2.50 (midpoint between moderately important and important). That is, knowledge or skill statements with a mean importance rating equal to or greater than 2.50 were classified as important (passed the cut point); and statements with a mean importance rating of less than 2.50 were classified as unimportant (failed to pass the cut point). This same cut point value of 2.50 was used in the present study.

It should also be noted that, similar to the previous job analysis studies, a caveat to the strict application of the cut point was introduced. Because survey respondents were not involved in the development of the knowledge and skills domain, they may lack certain insights that the Advisory/Test Development Committee members have because of their high level of involvement in the definition of the domain. As a consequence, if the committee members believe that a knowledge or skill statement rated below 2.50 should be considered for inclusion in the development of the Subject Assessment in Business Education, and the members can provide *compelling written rationales*, that knowledge or skill statement may be reinstated for inclusion. The latitude given the committee members in making final test content decisions is consistent with recommended professional practice. Madaus and Mehrens (1990) have clearly stated that the results of a job analysis survey should influence final decisions, but should not force the decisions, and that final decisions should be left to the committee members.

Secondary Analyses

Means and standard deviations (SDs) were to be computed for the ratings of both content coverage and content emphasis. The former provides an indication of the comprehensiveness of the knowledge and skills domain. The latter provides an indication of the weight each major content area should receive on the Subject Assessment in Business Education. These values were to be computed by teachers, administrators, and teacher educators.

Results

Survey Respondents

Response rate. Of the 1,023 total job analysis surveys that were mailed, 7 were returned because of an invalid mailing address, and 5 were returned after data analysis had already been completed. The response rate, adjusted for these 12 surveys, was 31% (313/1,011).

Demographic characteristics. On average, 306 respondents completed the background information section of the job analysis survey. Of those providing background information, 66% were female, 87% were White, and 73% had 11 or more years of teaching experience. The largest proportion (70%) were teachers; 16% were college faculty (teacher educators); and 11% held an administrative job title (i.e., principal or assistant principal, school administrator, curriculum supervisor, or state administrator)[1]. A complete breakdown of the demographic characteristics of the survey respondents is provided in Appendix E.

Importance Ratings: Analysis of Means

Aggregate of survey respondents. Means and SDs were computed for the 207 knowledge statements and skill statements by the total number (n = 313) of survey respondents. This level of analysis provides an overall description of the perceived importance of the statements. The means ranged from a low of 2.27 (~ moderately important) to a high of 3.96 (~ very important); 18% (n = 37) were between 4.00 and 3.50; 30% (n = 62) were between 3.49 and 3.25; 33% (n = 69) were between 3.24 and 3.00; and 19% (n = 39) were between 2.99 and 2.27. The average standard deviation for the profile of 207 knowledge statements and skill statements was 0.81 (minimum SD = 0.22, and maximum SD = 1.09).

Teachers, administrators, and teacher educators. Means and SDs were computed for each of the 12 major content areas by the three groups of survey respondents (see Table 1). All the content areas were rated moderately important or higher. For the teachers, Accounting/Bookkeeping, Business Math, Office Technology and Procedures, and Information Processing received the

[1] Respondents who held an administrative job title were grouped together under the heading *administrator* to ensure that there would be an adequate number of respondents for analyses.

highest ratings. For the administrators, Business Communication/Business English, Pedagogy Specific to Business Education, Accounting/Bookkeeping, and Office Technology and Procedures received the highest ratings. For the teacher educators, Business Communication/Business English, Business Math, Economics, and Accounting/Bookkeeping received the highest ratings.

Table 1
Mean Importance Ratings for Major Content Areas -- Teachers, Administrators, and Teacher Educators

	Teachers		Administrators		Teacher Educators	
Major Content Areas	Mean	SD	Mean	SD	Mean	SD
Accounting/Bookkeeping	3.65	0.58	3.72	0.52	3.47	0.59
Business Communication/Business English	3.53	0.63	3.81	0.48	3.80	0.41
Business Law	3.23	0.74	3.19	0.75	3.20	0.78
Business Math	3.59	0.62	3.69	0.54	3.76	0.48
Business Organization and Management	3.13	0.74	3.35	0.66	3.39	0.70
Economics	3.24	0.77	3.58	0.62	3.56	0.63
Finance	3.23	0.77	3.41	0.76	3.30	0.67
Information Processing	3.56	0.63	3.61	0.50	3.34	0.73
Marketing	3.06	0.86	3.26	0.86	3.17	0.79
Office Technology and Procedures	3.58	0.60	3.70	0.53	2.88	1.03
Vocational Education	3.31	0.78	3.29	0.78	2.95	0.90
Pedagogy Specific to Business Education	3.42	0.70	3.72	0.63	3.22	1.01

Means and SDs were also computed for each of the 207 knowledge statements and skill statements by the three groups of survey respondents. These values are presented in Appendix F. Those statements with a mean importance rating lower than the cut point of 2.50 are displayed in Table 2. In total, 17 statements (8%) had a mean rating of less than 2.50 across the teachers, administrators, and teacher educators. Teacher educators alone accounted for 12 (71%) of the 17 statements rated below 2.50. Only one statement, "identify procedures and characteristics of programming operations and languages," was rated below 2.50 by all three groups of survey respondents; two statements, "describe the concept of tax accounting" and "describe the concept of cost accounting," were rated below 2.50 by both teachers and teacher educators.

Table 2
Knowledge or Skill Statements Rated Below 2.50 -- Teachers, Administrators, and Teacher Educators

Statements	Teachers	Administrators	Teacher Educators
I. **ACCOUNTING/BOOKKEEPING**			
5. Compare accounting procedures for property tax, FICA tax, and state and federal employee income tax			2.13
7. Describe and interpret combination journals			2.42
18. Describe the concept of tax accounting	2.25		2.20
19. Describe the concept of cost accounting	2.18		2.36
21. Use financial ratios	2.16		
II. **BUSINESS COMMUNICATION/BUSINESS ENGLISH**			
39. Describe the competencies needed for effective international communication	2.43		
III. **BUSINESS LAW**			
50. Identify legal aspects of a bailment			2.22
54. Describe a consignment			2.43
64. Describe different types of wills			2.04
VII. **FINANCE**			
138. Understand the use of a proxy			2.43
VIII. **INFORMATION PROCESSING**			
146. Describe the concept of micrographics			2.33
155. Perform machine transcription			2.02
156. Identify procedures and characteristics of programming operations and languages	2.31	2.25	1.88
IX. **MARKETING**			
173. Define warehousing			2.33
175. Calculate inventory figures			2.30
X. **OFFICE TECHNOLOGY AND PROCEDURES**			
189. Describe effective methods of processing mail			2.25
195. Describe procedures for planning business travel and meetings			2.34

Subgroups of survey respondents. In order to support the fairness and relevance of the test content to the diversity of teacher candidates, means were computed for appropriate subgroups of survey respondents: race or ethnicity[2], sex, geographic region, and teaching experience (only for respondents who identified themselves as teachers). These values are presented in Appendix G. Those statements with a mean importance rating lower than the cut point of 2.50 are displayed in Table 3. In total, only 10 statements (5%) had a mean rating of less than 2.50 across the different subgroups of survey respondents. Two of these statements, "describe different types of wills" and "define warehousing," were rated below 2.50 only by male survey respondents. All of these 10 statements, nonetheless, were "flagged" by the mean analysis computed by the teachers, administrators, and teacher educators. Thus, no new statements were flagged by the subgroup analysis.

Importance Ratings: Correlational Analyses

Teachers, administrators, and teacher educators. Pairwise correlations of the profiles of mean importance ratings for the teachers, administrators, and teacher educators were conducted. The correlation between teachers and administrators was 0.91; it was 0.78 between teachers and teacher educators; and it was 0.82 between administrators and teacher educators. These results indicate a high level of agreement between the teachers and the administrators, and a moderately high level of agreement between the teachers and the teacher educators and between the administrators and the teacher educators.

Subgroups of survey respondents. Pairwise correlations of the profiles of mean importance ratings were also computed within the different subgroups. For example, within the subgroup of sex, the profile of means for males was correlated with the profile of means for females. The correlation values for all the subgroups are presented in Table 4. There was a high level of agreement in terms of the relative importance of the statements within each of the subgroups of respondents; the average (Fisher z) intrasubgroup correlation was .92.

Mean Ratings of Content Coverage

All three respondent groups (teachers, administrators, and teacher educators) indicated that each major content area was well covered by its respective knowledge or skill statements. All the mean ratings, presented in Table 5, were close to or exceeded a value of 4.00 on the 1-to-5 point scale described on page 7.

[2] Racial or ethnic minority respondents were grouped together under the heading *minority* to ensure that there would be an adequate number of respondents for analyses.

Table 3
Knowledge or Skill Statements Rated Below 2.50 -- Subgroups

Statements	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	S	C	FW	≤10 yrs.	≥11 yrs.
I. **ACCOUNTING/BOOKKEEPING**										
18. Describe the concept of tax accounting	2.33	2.31	2.33	2.32		2.33	2.25	2.25	2.27	2.33
19. Describe the concept of cost accounting	2.29	2.31	2.32	2.24	2.47	2.30	2.17	2.33	2.20	2.29
21. Use financial ratios	2.31		2.25	2.49	2.48	2.40	2.19	2.32	2.18	2.31
II. **BUSINESS COMMUNICATION/BUSINESS ENGLISH**										
39. Describe the competencies needed for effective international communication	2.48			2.46					2.41	
III. **BUSINESS LAW**										
64. Describe different types of wills				2.33						
VII. **FINANCE**										
138. Understand the use of a proxy										
VIII. **INFORMATION PROCESSING**										
146. Describe the concept of micrographics									2.48	
155. Perform machine transcription				2.36					2.41	
156. Identify procedures/characteristics of programming operations and languages	2.21		2.30	2.19	2.17	2.25	2.46	2.08	2.29	2.30
IX. **MARKETING**										
173. Define warehousing				2.40						

NOTE: W = White; Mi = Minority; F = Female; M = Male; NE = Northeast; C = Central; S = Southern; FW = Far West.

Table 4
Correlations of the Profiles of Mean Importance -- Subgroups

	1	2	3	4
RACE/ETHNICITY				
1. White				
2. Minority	.91			
SEX				
1. Female				
2. Male	.87			
GEOGRAPHIC REGION				
1. Northeast				
2. Southern	.95			
3. Central	.88	.91		
4. Far West	.93	.94	.89	
TEACHING EXPERIENCE (years)				
1. ≤ 10				
2. ≥ 11	.96			

Table 5
Mean Ratings of Content Coverage -- Teachers, Administrators, and Teacher Educators

	Teachers		Administrators		Teacher Educators	
Major Content Areas	Mean	SD	Mean	SD	Mean	SD
Accounting/Bookkeeping	4.48	0.68	4.50	0.62	4.04	0.88
Business Communication/Business English	4.25	0.69	4.31	0.74	4.16	0.68
Business Law	4.30	0.71	4.39	0.56	3.98	0.91
Business Math	4.25	0.78	4.35	0.66	4.00	0.87
Business Organization and Management	4.27	0.69	4.27	0.64	4.07	0.77
Economics	4.41	0.68	4.61	0.56	4.23	0.81
Finance	4.36	0.70	4.42	0.56	4.24	0.75
Information Processing	4.27	0.75	4.23	0.84	4.05	0.86
Marketing	4.28	0.73	4.22	0.75	4.10	0.79
Office Technology and Procedures	4.33	0.75	4.17	0.79	3.95	0.70
Vocational Education	4.09	0.85	3.88	0.91	3.72	0.91
Pedagogy Specific to Business Education	4.36	0.69	4.57	0.63	4.22	0.79

Mean Ratings for Content Emphasis

In general, the teachers, administrators, and teacher educators agreed on the emphasis they believed should be put on each of the major content areas (see Table 6). Both the teachers and the administrators believed that Accounting/Bookkeeping, Information Processing, Office Technology and Procedures, and Business Communication/Business English should receive the greatest emphasis. The teacher educators similarly believed that Accounting/Bookkeeping and Business Communication/Business English should be emphasized, and they also placed emphasis on Business Math.

Table 6
Mean Ratings of Content Emphasis -- Teachers, Administrators, and Teacher Educators

	Teachers		Administrators		Teacher Educators	
Major Content Areas	Mean	SD	Mean	SD	Mean	SD
Accounting/Bookkeeping	12.59	5.85	10.06	3.97	10.89	4.35
Business Communication/Business English	10.46	3.90	9.88	3.23	12.64	6.10
Business Law	7.44	3.70	6.28	2.47	7.41	3.55
Business Math	8.57	3.68	7.44	2.23	10.16	4.13
Business Organization and Management	6.83	3.28	7.59	2.34	8.59	3.55
Economics	7.13	3.70	8.00	2.53	8.64	3.64
Finance	6.56	3.21	7.22	2.30	7.80	3.34
Information Processing	10.78	4.91	10.56	5.21	8.05	3.40
Marketing	6.37	3.31	6.09	2.81	7.50	3.45
Office Technology and Procedures	10.18	4.54	10.72	5.49	6.55	3.66
Vocational Education	5.95	3.05	6.94	3.47	4.42	2.81
Pedagogy Specific to Business Education	8.79	5.85	9.22	4.76	7.45	4.72

Summary and Conclusion

The purpose of this study was to conduct a job analysis of the knowledge and skills important for the competent performance of beginning business education teachers. The results of the job analysis will be used to define the content domain of the Subject Assessment in Business Education for the Praxis Series: Professional Assessments for Beginning Teachers.

A domain of important knowledge statements and skill statements was developed by subject-matter experts. This domain was then administered, as a survey, to a large number of business education teachers, administrators, and teacher educators. The survey component functioned as an independent

verification or refutation of the importance of the knowledge statements and skill statements defined by the subject-matter experts. Statements that were judged to have a mean importance rating equal to or greater than 2.50 (midpoint between moderately important and important) by all groups (teachers, administrators, and teacher educators) and all subgroups (race or ethnicity, sex, geographic region, and teaching experience) of survey respondents were considered eligible for inclusion in the development of the Subject Assessment in Business Education.

The results indicated that of the 207 knowledge statements and skill statements, 17 (8%) had a mean rating of less than 2.50 across the teachers, administrators, and teacher educators (see Table 2); teacher educators, alone, accounted for 12 (71%) of the 17 statements rated below 2.50. The subgroup analysis also flagged 10 of these same 17 statements as being rated less than 2.50; no additional statements were identified by the subgroup analysis.

It is recommended that these 17 statements not be included in the development of the Subject Assessment in Business Education. Primary emphasis, in the test develop process, should be placed on the 190 knowledge or skill statements that did pass the 2.50 cut point. Consideration should only be given to the 17 flagged statements if the members of the Advisory/Test Development Committee firmly believe that these 17 statements are important enough for reinstatement and can support their decisions with *compelling written rationales*.

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Appendix C

Job Analysis Inventory

JOB ANALYSIS INVENTORY

FOR BEGINNING TEACHERS OF

BUSINESS EDUCATION

Educational Testing Service
Princeton, New Jersey

C3

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INTRODUCTION

Educational Testing Service (ETS) is developing a new generation of assessments for the purpose of licensing (certifying) beginning teachers. The inventory that follows is part of our development effort and is designed to gather information concerning the beginning business education teacher's job. (In particular, what knowledge and skills are important for beginning business education teachers to possess if they are to perform their jobs in a competent manner?) It was developed by classroom teachers, college faculty, and state department of education officials, along with ETS staff.

The inventory asks you to respond to a list of knowledge and skill statements and to rate the importance of each statement for a beginning business education teacher. Please do not relate each statement to your own job but rather to what you believe a beginning business education teacher should know and be able to do.

The information you provide will guide the development of the Business Education subject assessment of The Praxis Series: Professional Assessments for Beginning Teachers ™. In addition to the development of a new examination, this study will also contribute to our understanding of business education as a profession. We expect the results of the study to be widely disseminated.

The inventory has been mailed to a national sample of 1,000 educational professionals. Its value is directly related to the number of individuals who return their completed inventories. Because you represent a large number of professionals, your responses are extremely important. Please take the time to complete and return the inventory.

PART I - KNOWLEDGE AND SKILLS FOR BUSINESS EDUCATION TEACHERS

The purpose of this inventory is to determine what you believe beginning business education teachers should know and be able to do in order to perform their jobs in a competent manner. On the following pages you will find 12 major content areas and beneath each, a list of knowledge and skill statements that define the particular content area. The order of presentation of the 12 content areas is not meaningful.

The 12 content areas are:

I. Accounting/Bookkeeping
II. Business Communication/Business English
III. Business Law
IV. Business Math
V. Business Organization and Management
VI. Economics
VII. Finance
VIII. Information Processing
IX. Marketing
X. Office Technology and Procedures
XI. Vocational Education
XII. Pedagogy Specific to Business Education

For each statement within each of these content areas, you will be asked to make the following judgment:

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

To familiarize yourself with the content areas and statements, you may wish to glance through the inventory before making your judgments.

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

I. ACCOUNTING/BOOKKEEPING	IMPORTANCE
1. Describe the basic accounting cycle	0 1 2 3 4
2. Describe the principles of accounting	0 1 2 3 4
3. Identify steps necessary to open a set of accounting records	0 1 2 3 4
4. Interpret the accounting equation: assets = liabilities + equity	0 1 2 3 4
5. Compare accounting procedures for property tax, FICA tax, and state and federal employee income tax	0 1 2 3 4
6. Prepare and analyze financial statements	0 1 2 3 4
7. Describe and interpret combination journals	0 1 2 3 4
8. Understand the use of debits and credits	0 1 2 3 4
9. Understand the procedures for journalizing transactions	0 1 2 3 4
10. Describe the concept of posting	0 1 2 3 4
11. Describe and interpret subsidiary ledgers	0 1 2 3 4
12. Describe the elements of a balance sheet	0 1 2 3 4
13. Summarize the principles of debit and credit for balance sheet accounts	0 1 2 3 4
14. Describe the concept of trial balance and post-closing trial balance	0 1 2 3 4
15. Prepare worksheets	0 1 2 3 4
16. Describe closing procedures/entries	0 1 2 3 4
17. Use source documents to journalize transactions	0 1 2 3 4
18. Describe the concept of tax accounting	0 1 2 3 4
19. Describe the concept of cost accounting	0 1 2 3 4
20. Explain and use computerized accounting systems	0 1 2 3 4
21. Use financial ratios	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

I. ACCOUNTING/BOOKKEEPING (cont.)	IMPORTANCE
22. Analyze employees' weekly or monthly earnings using the payroll register, time card, and all other withholding information (e.g., FICA, state tax, and unemployment compensation)	0 1 2 3 4
23. Describe the concepts of account receivable and bad debit expense	0 1 2 3 4
24. **Overall evaluation of the importance of Accounting/Bookkeeping**	0 1 2 3 4

25. How well do the statements in section I cover the important aspects of Accounting/Bookkeeping?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

II. BUSINESS COMMUNICATION/BUSINESS ENGLISH	IMPORTANCE
26. Demonstrate standard English grammar (e.g., punctuation, word usage, sentence structure, principles of good paragraph construction)	0 1 2 3 4
27. Identify appropriate placement of components in various forms of written correspondence	0 1 2 3 4
28. Use appropriate reference citations	0 1 2 3 4
29. Demonstrate skills needed to prepare outlines and manuscripts	0 1 2 3 4
30. Perform proofreading	0 1 2 3 4
31. Perform editing	0 1 2 3 4
32. Determine criteria to select and use appropriate services and formats to meet various communication needs	0 1 2 3 4
33. Demonstrate effective written communication skills	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

II. BUSINESS COMMUNICATION/BUSINESS ENGLISH (cont.)	IMPORTANCE
34. Demonstrate effective oral communication skills	0 1 2 3 4
35. Understand the impact of nonverbal communication	0 1 2 3 4
36. Demonstrate effective listening skills	0 1 2 3 4
37. Identify strategies to overcome communication barriers	0 1 2 3 4
38. Identify communication characteristics of diverse populations (e.g., multicultural, regional)	0 1 2 3 4
39. Describe the competencies needed for effective international communication	0 1 2 3 4
40. Describe appropriate technologies for maintaining effective communication	0 1 2 3 4
41. **Overall evaluation of the importance of Business Communication/ Business English**	0 1 2 3 4

42. How well do the statements in section II cover the important aspects of Business Communication/Business English?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

III. BUSINESS LAW	IMPORTANCE
43. Describe basic principles of business law	0 1 2 3 4
44. Explain the role of the civil branch of law	0 1 2 3 4
45. Describe the United States legal system and court structure	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

III. BUSINESS LAW (cont.)		IMPORTANCE
46.	Describe elements and functions of contracts	0 1 2 3 4
47.	Describe types of contracts	0 1 2 3 4
48.	Identify requirements that make a contract enforceable	0 1 2 3 4
49.	Describe the methods of discharging contracts (e.g., performance, agreement)	0 1 2 3 4
50.	Identify legal aspects of a bailment	0 1 2 3 4
51.	Define and differentiate between ownership and tenancy	0 1 2 3 4
52.	Define agent and principal	0 1 2 3 4
53.	Define creditor and debtor	0 1 2 3 4
54.	Describe a consignment	0 1 2 3 4
55.	Describe the functions and requirements of negotiations	0 1 2 3 4
56.	Describe a negotiable instrument	0 1 2 3 4
57.	Describe the types, functions, and characteristics of tort law (e.g., conversion, trespass)	0 1 2 3 4
58.	Distinguish between the law of torts and the law of crimes	0 1 2 3 4
59.	Describe the function and characteristic of statutory law	0 1 2 3 4
60.	Describe the function of bankruptcy	0 1 2 3 4
61.	Understand different regulations that protect consumers (e.g., Fair Credit Act, Consumer Credit Protection Act, Equal Credit Opportunity Act)	0 1 2 3 4
62.	Describe the concept of discrimination	0 1 2 3 4
63.	Discuss the role of different federal agencies (e.g., FTC, EPA, FDA, OSHA) in regulating business	0 1 2 3 4
64.	Describe different types of wills	0 1 2 3 4
65.	**Overall evaluation of the importance of Business Law**	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

III. BUSINESS LAW (cont.)

66. How well do the statements in section III cover the important aspects of Business Law?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

IV. BUSINESS MATH

		IMPORTANCE
67.	Perform basic computational functions (i.e., addition, subtraction, multiplication, division)	0 1 2 3 4
68.	Perform basic computational functions using decimals and fractions	0 1 2 3 4
69.	Explain basic statistical concepts (e.g., mean, standard deviation)	0 1 2 3 4
70.	Calculate percentages and ratios	0 1 2 3 4
71.	Calculate interest rates (e.g., simple and compound)	0 1 2 3 4
72.	Calculate cash discounts and trade discounts	0 1 2 3 4
73.	Understand methods of charging interest (add-on interest, note discounting)	0 1 2 3 4
74.	**Overall evaluation of the importance of Business Math**	0 1 2 3 4

75. How well do the statements in section IV cover the important aspects of Business Math?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

V. BUSINESS ORGANIZATION AND MANAGEMENT		IMPORTANCE
76.	Identify major forms of business organizations (e.g., corporation, partnership, sole proprietorship, cooperative)	0 1 2 3 4
77.	Describe the role of entrepreneurship	0 1 2 3 4
78.	Describe the form and function of business plans	0 1 2 3 4
79.	Identify the roles and implications of governmental regulations in business	0 1 2 3 4
80.	Understand organizational structure and principles	0 1 2 3 4
81.	Explain managerial functions (e.g., planning, organizing, leading, and controlling a business enterprise)	0 1 2 3 4
82.	Understand different strategies of management	0 1 2 3 4
83.	Describe management information systems	0 1 2 3 4
84.	Discuss the concepts of managerial decision-making	0 1 2 3 4
85.	Understand the importance of accountability and ethics	0 1 2 3 4
86.	Discuss the concept of labor-management relations	0 1 2 3 4
87.	Discuss the concept of human resource planning	0 1 2 3 4
88.	**Overall evaluation of the importance of Business Organization and Management**	0 1 2 3 4

89. How well do the statements in section V cover the important aspects of Business Organization and Management?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

VI.	ECONOMICS	IMPORTANCE
90.	Describe basic economic principles and theories as they relate to business	0 1 2 3 4
91.	Describe the fundamental factors operating in micro-economic analysis	0 1 2 3 4
92.	Describe the fundamental factors operating in macro-economic analysis	0 1 2 3 4
93.	Describe economic effects of inflation and deflation	0 1 2 3 4
94.	Define consumer price index	0 1 2 3 4
95.	Understand the concepts of supply and demand and equilibrium price and quantity	0 1 2 3 4
96.	Understand the difference between elastic demand and inelastic demand and their effects on revenue	0 1 2 3 4
97.	Describe and interpret the tools of economic analysis (e.g., tables, charts)	0 1 2 3 4
98.	Describe different types of market structure (e.g., monopoly, oligopoly, monopsony)	0 1 2 3 4
99.	Describe different types of economic systems	0 1 2 3 4
100.	Contrast roles of individuals, business firms, and governments in different economic systems	0 1 2 3 4
101.	Identify characteristics of free enterprise and the role of business in it	0 1 2 3 4
102.	Describe the economic effects of fiscal and monetary policy	0 1 2 3 4
103.	Understand the elements of Gross National Product (GNP)	0 1 2 3 4
104.	Describe the difference between personal income, gross income, and disposable income	0 1 2 3 4
105.	Understand different types of taxation (e.g., federal income, excise, real property, sales) and the principles they are based on (e.g., regressive, proportional, progressive)	0 1 2 3 4
106.	Define balance of trade	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

VI. ECONOMICS (cont.)		IMPORTANCE
107.	Describe the role of the consumer in the economy	0 1 2 3 4
108.	Describe the role of the producer in the economy	0 1 2 3 4
109.	Identify economic resources	0 1 2 3 4
110.	Demonstrate an understanding of global economy	0 1 2 3 4
111.	Identify the effects of international trade on the United States economy	0 1 2 3 4
112.	Understand the profit maximizing rule and the break-even point	0 1 2 3 4
113.	**Overall evaluation of the importance of Economics**	0 1 2 3 4

114. How well do the statements in section VI cover the important aspects of Economics?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

VII. FINANCE		IMPORTANCE
115.	Describe the structure of the United States banking system, including the Federal Reserve System	0 1 2 3 4
116.	Identify types of financial institutions and their roles in providing services in the area of transfer of funds, credit, and investment	0 1 2 3 4
117.	Identify types of saving and investment institutions	0 1 2 3 4
118.	Distinguish between types of investments	0 1 2 3 4
119.	Distinguish between debt and equity	0 1 2 3 4
120.	Explain types of services provided by financial institutions	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

VII. FINANCE (cont.)		IMPORTANCE
121.	Identify the steps to reconcile a bank statement	0 1 2 3 4
122.	Distinguish between a checking account and a savings account	0 1 2 3 4
123.	Demonstrate correct procedures for preparing a check	0 1 2 3 4
124.	Identify the parts of a promissory note and the functions of each	0 1 2 3 4
125.	Compare features of different types of loans	0 1 2 3 4
126.	Explain the role of credit and the impact of long-term and short-term credit	0 1 2 3 4
127.	Understand the concept of credit costs	0 1 2 3 4
128.	Understand the concept of present value theory	0 1 2 3 4
129.	Develop budgets	0 1 2 3 4
130.	Demonstrate knowledge of different types of budget processes (e.g., continuous, annual, zero-base budgeting)	0 1 2 3 4
131.	Compare the processes for securing funds for proprietorship, partnership, corporation, and a cooperative	0 1 2 3 4
132.	Explain the value of capital assets as a form of collateral	0 1 2 3 4
133.	Identify the causes and effects of individual and corporate bankruptcy	0 1 2 3 4
134.	Identify the characteristics of different types of insurance (e.g., life, health, home, automobile)	0 1 2 3 4
135.	Understand the main functions of a balance sheet	0 1 2 3 4
136.	Understand different types of stock and bonds (e.g., common stock, preferred stock, redeemable) and the risks involved in each	0 1 2 3 4
137.	Understand concepts related to the stock market	0 1 2 3 4
138.	Understand the use of a proxy	0 1 2 3 4
139.	**Overall evaluation of the importance of Finance**	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

VII. FINANCE (cont.)

140. How well do the statements in section VII cover the important aspects of Finance?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

VIII.	INFORMATION PROCESSING	IMPORTANCE
141.	Apply procedures to format and prepare charts, tables, and statistical data	0 1 2 3 4
142.	Define major terms used in information processing	0 1 2 3 4
143.	Identify components and methods of the information processing cycle	0 1 2 3 4
144.	Identify types and characteristics of information processing hardware and software	0 1 2 3 4
145.	Demonstrate knowledge of computer operations	0 1 2 3 4
146.	Describe the concept of micrographics	0 1 2 3 4
147.	Design and prepare information for computer processing	0 1 2 3 4
148.	Demonstrate procedures used for data entry	0 1 2 3 4
149.	Describe data storage and retrieval systems	0 1 2 3 4
150.	Identify capabilities of computer hardware and software	0 1 2 3 4
151.	Describe the applications of software packages	0 1 2 3 4
152.	Describe the functions of computer operating systems	0 1 2 3 4
153.	Identify features of database management	0 1 2 3 4
154.	Describe the concept of desktop publishing	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

VIII.	INFORMATION PROCESSING (cont.)	IMPORTANCE
155.	Perform machine transcription	0 1 2 3 4
156.	Identify procedures and characteristics of programming operations and languages	0 1 2 3 4
157.	Analyze computer-generated output	0 1 2 3 4
158.	**Overall evaluation of the importance of Information Processing**	0 1 2 3 4

159. How well do the statements in section VIII cover the important aspects of Information Processing?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

IX.	MARKETING	IMPORTANCE
160.	Identify the four "P's" that make up the marketing mix	0 1 2 3 4
161.	Explain the concepts of exchange and facilitation	0 1 2 3 4
162.	Discuss sales techniques	0 1 2 3 4
163.	Discuss advertising techniques	0 1 2 3 4
164.	Discuss display concepts	0 1 2 3 4
165.	Describe merchandising	0 1 2 3 4
166.	Describe buying	0 1 2 3 4
167.	Distinguish between wholesaling and retailing	0 1 2 3 4
168.	Describe the impact of credit on buying and selling	0 1 2 3 4
169.	Identify government regulations concerning credit	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

IX. MARKETING (cont.)		IMPORTANCE
170.	Describe the function of market analysis	0 1 2 3 4
171.	Describe marketing strategies	0 1 2 3 4
172.	Describe the function of an analysis of consumer behavior	0 1 2 3 4
173.	Define warehousing	0 1 2 3 4
174.	Define inventory and depreciation	0 1 2 3 4
175.	Calculate inventory figures	0 1 2 3 4
176.	Classify goods and services	0 1 2 3 4
177.	Describe the stages in a product life cycle	0 1 2 3 4
178.	Describe the various channels of distribution (e.g., producer, wholesaler, retailer)	0 1 2 3 4
179.	Compare marketing and production costs	0 1 2 3 4
180.	Define the concept of a price system	0 1 2 3 4
181.	Describe types of pricing strategies	0 1 2 3 4
182.	**Overall evaluation of the importance of Marketing**	0 1 2 3 4

183. How well do the statements in section IX cover the important aspects of Marketing?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

X. OFFICE TECHNOLOGY AND PROCEDURES		IMPORTANCE
184.	Demonstrate effective keyboarding techniques	0 1 2 3 4
185.	Demonstrate effective skills and techniques in the operation of office equipment	0 1 2 3 4
186.	Compare advantages and disadvantages of various office equipment	0 1 2 3 4
187.	Understand the organizational relationships among work units (e.g., organizational charts, divisions, departments)	0 1 2 3 4
188.	Describe the administrative services needed for office operations	0 1 2 3 4
189.	Describe effective methods of processing mail	0 1 2 3 4
190.	Describe procedures of records management	0 1 2 3 4
191.	Describe the characteristics and appropriate use of different filing systems (e.g., alphabetic, numeric, geographic)	0 1 2 3 4
192.	Identify steps used in filing procedures (e.g., inspecting, sorting, coding)	0 1 2 3 4
193.	Identify the roles of different office workers	0 1 2 3 4
194.	Demonstrate knowledge of office etiquette	0 1 2 3 4
195.	Describe procedures for planning business travel and meetings	0 1 2 3 4
196.	Apply time management techniques (e.g., setting priorities, work schedules)	0 1 2 3 4
197.	Determine criteria to select and use appropriate equipment and software for specific office functions	0 1 2 3 4
198.	Identify procedures needed for composing at the computer/ typewriter	0 1 2 3 4
199.	**Overall evaluation of the importance of Office Technology and Procedures**	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

X. OFFICE TECHNOLOGY AND PROCEDURES (cont.)

200. How well do the statements in section X cover the important aspects of Office Technology and Procedures?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

XI. VOCATIONAL EDUCATION

		IMPORTANCE
201.	Identify major legislation which impacts vocational business education	0 1 2 3 4
202.	Define the characteristics of a vocational business education program	0 1 2 3 4
203.	Identify and use occupational publications (e.g., Occupational Outlook Handbook, journals, periodicals)	0 1 2 3 4
204.	Explain the process of assisting students in setting career goals	0 1 2 3 4
205.	Define the purpose for establishing advisory committees	0 1 2 3 4
206.	Describe the components of a job search process (e.g., letter of application, resume, interview)	0 1 2 3 4
207.	Explain the purpose of articulation among vocational business education programs	0 1 2 3 4
208.	**Overall evaluation of the importance of Vocational Education**	0 1 2 3 4

How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

XI. VOCATIONAL EDUCATION (cont.)

209. How well do the statements in section XI cover the important aspects of Vocational Education?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

_____

_____

XII. PEDAGOGY SPECIFIC TO BUSINESS EDUCATION

In addition to content, business education teachers also need to know something about pedagogy specific to business education. This might include knowledge of students, curriculum, and teaching strategies and resources.

		IMPORTANCE
210.	Understand the impact of learning theories on teaching business education	0 1 2 3 4
211.	Identify the effects of complex factors (e.g., societal, gender, racial, socioeconomic, language) that may affect the teaching of business education	0 1 2 3 4
212.	Identify the effects of complex factors (e.g., societal, gender, racial, socioeconomic, language) that may affect students' learning of business education	0 1 2 3 4
213.	Identify the steps in developing program goals	0 1 2 3 4
214.	Describe the process of formulating student competencies (e.g., outcomes and objectives)	0 1 2 3 4
215.	Develop and justify scope and sequence of topics of a business education curriculum	0 1 2 3 4
216.	Assemble curriculum materials and resources	0 1 2 3 4
217.	Evaluate curriculum materials and resources	0 1 2 3 4

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How **important** is this knowledge or skill for all beginning business education teachers if they are to perform their jobs in a competent manner?

Circle your response using the 5-point scale adjacent to each statement.

(0) Of no importance
(1) Of little importance
(2) Moderately important
(3) Important
(4) Very important

XII. PEDAGOGY SPECIFIC TO BUSINESS EDUCATION (cont.)		IMPORTANCE
218.	Develop lesson plans	0 1 2 3 4
219.	Design instructional strategies using materials and resources	0 1 2 3 4
220.	Understand the knowledge, experience, and skills that students bring to various topics in business education	0 1 2 3 4
221.	Understand the knowledge, experience, and skills that students need for various topics in business education	0 1 2 3 4
222.	Demonstrate strategies that reflect students' learning styles	0 1 2 3 4
223.	Demonstrate strategies to motivate and encourage students' success	0 1 2 3 4
224.	Demonstrate effective classroom management techniques (e.g., physical structure, time on task, handling discipline)	0 1 2 3 4
225.	Evaluate techniques to diagnose students' learning difficulties	0 1 2 3 4
226.	Assess students' achievement in relation to students' goals	0 1 2 3 4
227.	Evaluate program success in relation to program goals	0 1 2 3 4
228.	Identify professional literature (e.g., journals, reference works) appropriate for business education teachers and students	0 1 2 3 4
229.	Identify professional organizations for business education teachers and students	0 1 2 3 4
230.	**Overall evaluation of the importance of Pedagogy Specific to Business Education**	0 1 2 3 4

231. How well do the statements in section XII cover the important aspects of Pedagogy Specific to Business Education?

1	2	3	4	5
Very Poorly	Poorly	Adequately	Well	Very Well

What important aspects, if any, are not covered?

PART II - RECOMMENDATIONS FOR TEST CONTENT

Listed below are the 12 major content areas that you have just finished evaluating. If the new licensing examination for Business Education were to contain a total of 100 questions, how many questions should be included from each content area based on relative overall importance of the category? If you feel a category should not be included in the exam, put 0 in the space provided. Make sure your responses add up to 100.

	MAJOR CONTENT AREAS	NUMBER OF TEST QUESTIONS (out of 100)
232.	ACCOUNTING/BOOKKEEPING	_____
233.	BUSINESS COMMUNICATION/BUSINESS ENGLISH	_____
234.	BUSINESS LAW	_____
235.	BUSINESS MATH	_____
236.	BUSINESS ORGANIZATION AND MANAGEMENT	_____
237.	ECONOMICS	_____
238.	FINANCE	_____
239.	INFORMATION PROCESSING	_____
240.	MARKETING	_____
241.	OFFICE TECHNOLOGY AND PROCEDURES	_____
242.	VOCATIONAL EDUCATION	_____
243.	PEDAGOGY SPECIFIC TO BUSINESS EDUCATION	_____
	TOTAL	100

PART III - BACKGROUND INFORMATION

The information that you provide in this section is completely confidential and will be used for research purposes only. Please answer the questions by circling the number that most closely describes you or your professional activities. Unless otherwise indicated, please circle only one response for each question.

244. Where do you work?

1. Alabama
2. Alaska
3. Arizona
4. Arkansas
5. California
6. Colorado
7. Connecticut
8. Delaware
9. District of Columbia
10. Florida
11. Georgia
12. Hawaii
13. Idaho
14. Illinois
15. Indiana
16. Iowa
17. Kansas
18. Kentucky
19. Louisiana
20. Maine
21. Maryland
22. Massachusetts
23. Michigan
24. Minnesota
25. Mississippi
26. Missouri
27. Montana
28. Nebraska
29. Nevada
30. New Hampshire
31. New Jersey
32. New Mexico
33. New York
34. North Carolina
35. North Dakota
36. Ohio
37. Oklahoma
38. Oregon
39. Pennsylvania
40. Rhode Island
41. South Carolina
42. South Dakota
43. Tennessee
44. Texas
45. Utah
46. Vermont
47. Virginia
48. Washington
49. West Virginia
50. Wisconsin
51. Wyoming

245. What is your age?

1. Under 25
2. 25-34
3. 35-44
4. 45-54
5. 55-64
6. Over 64

246. What is your sex?

1. Female
2. Male

247. Which of the following best describes the area in which you work?

1. Urban
2. Suburban
3. Rural

248. How do you describe yourself?

1. Native American, American Indian, or Alaskan Native
2. Asian American, Asian, Native Hawaiian, or Pacific Islander
3. African American or Black
4. Mexican American or Chicano
5. Puerto Rican
6. Latin American, South American, Central American, or other Hispanic
7. White
8. Other (please specify)_____

249. Which of the following best describes your highest educational attainment?

1. Less than a bachelor's
2. Bachelor's
3. Bachelor's + additional credits
4. Master's
5. Master's + additional credits
6. Doctorate

250. Which of the following best describes your current employment status?

1. Permanent substitute (assigned on a long-term basis)
2. Regular teacher (not a substitute)
3. Principal or assistant principal
4. School administrator
5. Curriculum supervisor
6. State administrator
7. College faculty
8. Other (please specify)_____

251. How many years have you taught business education?

1. Never taught business education
2. Less than a year
3. 1 - 2 years
4. 3 - 5 years
5. 6 - 10 years
6. 11 - 15 years
7. 16 - 20 years
8. 21 or more years

252. What grade level(s) are you currently teaching? (Circle all that apply)

1. Preschool/Kindergarten
2. Grades 1-4
3. Grades 5-8
4. Grades 9-12
5. College
6. Do not teach
7. Did teach, but have retired (please give date of retirement)_____

253. Circle the following organizations to which you belong.

1. National Business Education Association
2. American Federation of Teachers
3. American Vocational Association
4. National Association for Business Teacher Education
5. National Association of Classroom Educators in Business Education
6. National Association of Teacher Educators for Business Education
7. National Association of Supervisors of Business Education
8. National Association of Business Education State Supervisors
9. National Education Association
10. Other (please specify)_____

THANK YOU FOR COMPLETING THIS INVENTORY.
PLEASE RETURN IT WITHIN 10 DAYS USING THE ENCLOSED ENVELOPE.

Appendix D

Inventory Cover Letter

September 9, 1992

Dear Colleague:

I am writing to ask your cooperation in a project that should be of importance to teachers, college faculty, administrators, and other professionals in the field of business education. Educational Testing Service (ETS) is in the process of developing a new series of tests, The Praxis Series: Professional Assessments for Beginning Teachers ™. These assessments include a set of Subject Assessments which measure subject matter knowledge and, where appropriate, knowledge about teaching that subject. I am asking for your help as we develop the Subject Assessment for business education.

As part of the developmental process of the Subject Assessment in business education, ETS has worked closely with teachers, college faculty, and school administrators to identify potentially important knowledge areas and skills. The enclosed inventory has been developed as a way to obtain your judgments of the importance of these knowledge areas and skills for beginning business education teachers. The information obtained from these inventories will be used to guide the design and content of the Subject Assessment in business education.

This inventory is being mailed to approximately 1,000 professionals in the specialty area of business education. Its value is directly related to the number of individuals who return their inventories. Because you represent a large number of professionals, your judgments are very important. Your responses will be kept in strict confidence. The inventory asks for some background information about you; this is solely for purposes of describing the group of respondents.

The results of this study are expected to be widely disseminated and should be very useful to the profession. A postage-paid envelope is enclosed for the return of your completed inventory. Thank you for your participation in this very important project.

Sincerely,

Richard Tannenbaum, Ph.D.
Research Scientist

Enclosures

Appendix E

Respondent Demographics

	Number	Percent
GEOGRAPHIC REGION		
Northeast	69	22.5
Central	87	28.3
Southern	89	29.0
Far West	62	20.2
Total	307	100.0
AGE (years)		
Under 25	1	0.3
25 - 34	39	12.6
35 - 44	95	30.7
45 - 54	115	37.2
55 - 64	54	17.3
Over 64	5	1.6
Total	309	100.0
SEX		
Female	202	65.8
Male	105	34.2
Total	307	100.0
AREA IN WHICH YOU WORK		
Urban	94	31.1
Suburban	92	30.5
Rural	116	38.4
Total	302	100.0
RACE/ETHNICITY		
Native American, American Indian, or Alaskan Native	13	4.3
Asian American, Asian, Native Hawaiian, or Pacific Islander	3	1.0
African American or Black	18	6.0
Mexican American or Chicano	1	0.3
Puerto Rican	0	0.0
Latin American, South American, Central American, or other Hispanic	0	0.0
White	263	87.4
Other	3	1.0
Total	301	100.0

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	Number	Percent
HIGHEST EDUCATIONAL ATTAINMENT		
Less than Bachelor's	0	0.0
Bachelor's	5	1.6
Bachelor's + Credits	85	27.5
Master's	44	14.2
Master's + Credits	143	46.3
Doctorate	32	10.4
Total	309	100.0
CURRENT EMPLOYMENT STATUS		
Permanent Substitute (assigned on a long-term basis)	2	0.7
Regular Teacher (not a substitute)	209	69.4
Principal or Assistant Principal	2	0.7
School Administrator	1	0.3
Curriculum Supervisor	3	1.0
State Administrator	26	8.6
College Faculty	48	15.9
Other	10	3.3
Total	301	100.0
TEACHING EXPERIENCE (years)		
Never taught business education	8	2.6
Less than 1	5	1.6
1 - 2	9	2.9
3 - 5	17	5.5
6 - 10	43	13.9
11 - 15	52	16.8
16 - 20	52	16.8
21 or more	123	39.8
Total	309	100.0
CURRENT TEACHING POSITION [1]		
Preschool/Kindergarten	0	0.0
Grades 1-4	0	0.0
Grades 5-8	14	4.3
Grades 9-12	212	65.8

	Number	Percent
CURRENT TEACHING POSITION (cont.)		
College	66	20.5
Do Not Teach	24	7.5
Did Teach, but have retired	6	1.9
Total	322	100.0
MEMBERSHIP IN ORGANIZATIONS [1]		
National Business Education Association	140	25.3
American Federation of Teachers	16	2.9
American Vocational Association	69	12.5
National Association for Business Teacher Education	13	2.4
National Association of Classroom Educators in Business Education	6	1.1
National Association of Teacher Educators for Business Education	4	0.7
National Association of Supervisors of Business Education	5	0.9
National Association of Business Education State Supervisors	18	3.3
National Education Association	140	25.3
Other	142	25.7
Total	553	100.0

[1] More than one response was allowed.

Appendix F

Mean Importance Ratings:
Teachers, Administrators, and Teacher Educators

	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
I. ACCOUNTING/BOOKKEEPING						
1. Describe the basic accounting cycle	3.76	0.52	3.84	0.45	3.43	0.96
2. Describe the principles of accounting	3.61	0.66	3.84	0.37	3.63	0.64
3. Identify steps necessary to open a set of accounting records	3.57	0.71	3.66	0.60	3.09	1.17
4. Interpret the accounting equation: assets = liabilities + equity	3.85	0.50	3.81	0.40	3.67	0.76
5. Compare accounting procedures for property tax, FICA tax, and state and federal employee income tax	2.59	1.09	3.19	0.78	2.13	1.07
6. Prepare and analyze financial statements	3.34	0.85	3.66	0.65	3.09	1.01
7. Describe and interpret combination journals	3.23	0.85	3.23	1.02	2.42	1.31
8. Understand the use of debits and credits	3.81	0.54	3.88	0.34	3.76	0.57
9. Understand the procedures for journalizing transactions	3.72	0.60	3.75	0.51	3.14	1.13
10. Describe the concept of posting	3.66	0.66	3.59	0.80	3.27	0.96
11. Describe and interpret subsidiary ledgers	3.34	0.87	3.41	0.67	2.77	1.18
12. Describe the elements of a balance sheet	3.67	0.62	3.75	0.44	3.67	0.60
13. Summarize the principles of debit and credit for balance sheet accounts	3.58	0.73	3.72	0.52	3.51	0.59
14. Describe the concept of trial balance and post-closing trial balance	3.44	0.75	3.53	0.57	2.87	1.08
15. Prepare worksheets	3.51	0.77	3.44	0.76	2.84	1.00
16. Describe closing procedures/entries	3.48	0.79	3.41	0.80	2.93	1.11
17. Use source documents to journalize transactions	3.40	0.78	3.59	0.71	2.77	1.16
18. Describe the concept of tax accounting	2.25	1.00	2.94	0.72	2.20	0.99
19. Describe the concept of cost accounting	2.18	1.03	2.84	0.77	2.36	0.88
20. Explain and use computerized accounting systems	3.14	0.92	3.69	0.47	2.96	0.95
21. Use financial ratios	2.16	1.07	2.78	1.01	2.71	1.06
22. Analyze employee's weekly or monthly earnings using the payroll register, etc.	3.34	0.79	3.25	0.80	2.77	1.01
23. Describe the concepts of account receivable and bad debit expense	3.10	0.83	3.16	0.77	2.84	1.02
24. Overall evaluation of Accounting/Bookkeeping	3.65	0.58	3.72	0.52	3.47	0.59
II. BUSINESS COMMUNICATION/BUSINESS ENGLISH						
26. Demonstrate standard English grammar	3.84	0.43	3.97	0.18	3.84	0.37
27. Identify appropriate placement of components in various forms of written correspondence	3.49	0.70	3.47	0.62	3.38	0.75
28. Use appropriate reference citations	3.02	0.86	2.94	0.72	3.00	0.83
29. Demonstrate skills needed to prepare outlines and manuscripts	3.25	0.80	3.09	0.86	3.09	0.85
30. Perform proofreading	3.82	0.49	3.88	0.42	3.29	0.79

	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
II. BUSINESS COMMUNICATION/BUSINESS ENGLISH (cont.)						
31. Perform editing	3.66	0.62	3.84	0.45	3.29	0.79
32. Determine criteria to select and use appropriate services and formats	3.15	0.79	3.44	0.62	2.89	0.84
33. Demonstrate effective written communication skills	3.80	0.47	3.97	0.18	3.93	0.25
34. Demonstrate effective oral communication skills	3.72	0.50	3.94	0.25	3.89	0.32
35. Understand the impact of nonverbal communication	3.31	0.75	3.50	0.67	3.49	0.63
36. Demonstrate effective listening skills	3.71	0.51	3.84	0.37	3.75	0.44
37. Identify strategies to overcome communication barriers	3.21	0.76	3.38	0.79	3.22	0.67
38. Identify communication characteristics of diverse populations	2.72	0.92	3.16	0.86	2.71	0.89
39. Describe the competencies needed for effective international communication	2.43	0.99	2.97	0.78	2.71	0.87
40. Describe the appropriate technologies for maintaining effective communication	3.06	0.78	3.22	0.79	2.62	0.98
41. Overall evaluation of Business Communication/Business English	3.53	0.63	3.81	0.48	3.80	0.41
III. BUSINESS LAW						
43. Describe basic principles of business law	3.45	0.73	3.44	0.80	3.25	0.87
44. Explain the role of the civil branch of law	3.30	0.77	3.19	0.74	3.07	0.82
45. Describe the United States legal system and court structure	3.28	0.79	3.38	0.71	3.11	0.87
46. Describe elements and functions of contracts	3.47	0.72	3.56	0.62	3.38	0.80
47. Describe types of contracts	3.33	0.78	3.41	0.71	3.06	0.92
48. Identify requirements that make a contract enforceable	3.46	0.73	3.53	0.62	3.30	0.83
49. Describe the methods of discharging contracts	3.20	0.87	3.35	0.84	3.02	1.03
50. Identify legal aspects of a bailment	2.80	0.87	2.70	0.75	2.22	1.11
51. Define and differentiate between ownership and tenancy	3.03	0.83	3.10	0.79	2.60	1.15
52. Define agent and principal	3.03	0.88	3.16	0.86	3.09	1.02
53. Define creditor and debtor	3.32	0.78	3.42	0.67	3.21	0.86
54. Describe a consignment	2.94	0.84	3.03	0.84	2.43	1.07
55. Describe the functions and requirements of negotiations	2.93	0.88	3.00	0.82	2.62	0.92
56. Describe a negotiable instrument	3.27	0.77	3.42	0.67	3.21	0.88
57. Describe the types, functions, and characteristics of tort law	3.07	0.91	2.94	0.73	2.74	1.03
58. Distinguish between the law of torts and the law of crimes	3.25	0.88	3.13	0.81	2.76	1.14
59. Describe the function and characteristic of statutory law	3.04	0.91	3.03	0.87	2.70	1.02
60. Describe the function of bankruptcy	3.00	0.82	3.26	0.82	2.87	0.88
61. Understand different regulations that protect consumers	3.20	0.79	3.39	0.80	2.94	0.96

	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
III. BUSINESS LAW (cont.)						
62. Describe the concept of discrimination	3.22	0.78	3.40	0.72	3.07	0.95
63. Discuss the role of different federal agencies	2.80	0.81	2.97	0.87	2.77	1.00
64. Describe different types of wills	2.74	1.00	2.77	0.80	2.04	1.00
65. Overall evaluation of Business Law	3.23	0.74	3.19	0.75	3.20	0.78
IV. BUSINESS MATH						
67. Perform basic computational functions	3.95	0.25	3.97	0.18	3.98	0.15
68. Perform basic computational functions using decimals and fractions	3.90	0.33	3.91	0.30	3.96	0.21
69. Explain basic statistical concepts	2.63	1.03	3.00	0.84	3.30	0.70
70. Calculate percentages and ratios	3.54	0.72	3.72	0.52	3.78	0.42
71. Calculate interest rates	3.65	0.62	3.66	0.65	3.72	0.54
72. Calculate cash discounts and trade discounts	3.58	0.63	3.63	0.75	3.50	0.69
73. Understand methods of charging interest	3.42	0.78	3.53	0.84	3.39	0.86
74. Overall evaluation of Business Math	3.59	0.62	3.69	0.54	3.76	0.48
V. BUSINESS ORGANIZATION AND MANAGEMENT						
76. Identify major forms of business organizations	3.61	0.63	3.71	0.46	3.82	0.45
77. Describe the role of entrepreneurship	3.49	0.70	3.74	0.44	3.35	0.75
78. Describe the form and function of business plans	2.96	0.83	3.35	0.80	3.16	0.78
79. Identify the roles and implications of governmental regulations in business	3.03	0.82	3.19	0.87	3.23	0.74
80. Understand organizational structure and principles	3.02	0.82	3.19	0.79	3.20	0.70
81. Explain managerial functions	3.16	0.86	3.42	0.72	3.57	0.70
82. Understand different strategies of management	2.97	0.88	3.13	0.85	3.05	0.84
83. Describe management information systems	2.87	0.85	3.29	0.74	2.91	0.86
84. Discuss the concepts of managerial decision-making	2.99	0.85	3.10	0.91	3.20	0.88
85. Understand the importance of accountability and ethics	3.41	0.72	3.74	0.44	3.48	0.70
86. Discuss the concept of labor-management relations	3.02	0.81	3.13	0.78	3.05	0.81
87. Discuss the concept of human resource planning	3.07	0.81	3.32	0.75	3.07	0.73
88. Overall evaluation of Business Organization and Management	3.13	0.74	3.35	0.66	3.39	0.70
VI. ECONOMICS						
90. Describe basic economic principles and theories as they relate to business	3.41	0.79	3.71	0.53	3.58	0.63
91. Describe the fundamental factors operating in micro-economic analysis	2.81	0.95	3.13	0.81	3.16	0.81
92. Describe the fundamental factors operating in macro-economic analysis	2.81	0.93	3.13	0.85	3.12	0.85

	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
VI. ECONOMICS (cont.)						
93. Describe economic effects of inflation and deflation	3.43	0.73	3.65	0.55	3.42	0.63
94. Define consumer price index	3.11	0.81	3.29	0.78	3.33	0.84
95. Understand the concepts of supply and demand and equilibrium price and quantity	3.38	0.79	3.65	0.61	3.63	0.62
96. Understand the difference between elastic demand and inelastic demand and their effects on revenue	2.87	0.96	3.23	0.80	3.21	0.89
97. Describe and interpret the tools of economic analysis	2.91	0.82	3.23	0.72	3.05	0.79
98. Describe different types of market structure	2.96	0.91	3.23	0.88	2.93	0.91
99. Describe different types of economic systems	3.26	0.82	3.52	0.72	3.09	0.84
100. Contrast roles of individuals, business firms, and governments in different economic systems	3.07	0.91	3.29	0.64	3.14	0.83
101. Identify characteristics of free enterprise and the role of business in it	3.46	0.75	3.74	0.51	3.49	0.63
102. Describe the economic effects of fiscal and monetary policy	2.91	0.90	3.29	0.74	3.05	0.82
103. Understand the elements of Gross National Product (GNP)	3.23	0.85	3.32	0.75	3.21	0.77
104. Describe the difference between personal income, gross income, and disposable income	3.51	0.72	3.48	0.81	3.30	0.80
105. Understand different types of taxation	3.18	0.89	3.39	0.80	2.98	0.91
106. Define balance of trade	2.99	0.84	3.20	0.85	3.07	0.83
107. Describe the role of the consumer in the economy	3.56	0.65	3.72	0.52	3.47	0.69
108. Describe the role of the producer in the economy	3.47	0.68	3.66	0.60	3.51	0.69
109. Identify economic resources	3.32	0.80	3.41	0.56	3.11	0.91
110. Demonstrate an understanding of global economy	3.06	0.87	3.56	0.67	3.36	0.84
111. Identify the effects of international trade on the United States economy	3.14	0.83	3.59	0.61	3.40	0.84
112. Understand the profit maximizing rule and the break-even point	2.91	0.93	3.41	0.67	3.24	0.88
113. Overall evaluation of Economics	3.24	0.77	3.58	0.62	3.56	0.63
VII. FINANCE						
115. Describe the structure of the United States banking system, including the Federal Reserve System	3.11	0.90	3.25	0.88	3.29	0.97
116. Identify types of financial institutions and their roles	3.08	0.85	3.31	0.90	3.38	0.75
117. Identify types of saving and investment institutions	3.23	0.82	3.25	0.80	3.18	0.72
118. Distinguish between types of investments	3.18	0.80	3.25	0.76	3.09	0.79
119. Distinguish between debt and equity	3.29	0.81	3.41	0.80	3.47	0.76
120. Explain types of services provided by financial institutions	3.25	0.77	3.28	0.92	2.98	0.72
121. Identify the steps to reconcile a bank statement	3.81	0.48	3.66	0.79	3.32	0.86
122. Distinguish between a checking account and a savings account	3.75	0.53	3.50	0.88	3.18	1.02
123. Demonstrate correct procedures for preparing a check	3.81	0.50	3.56	0.76	3.20	1.02

	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
VII. FINANCE (cont.)						
124. Identify the parts of a promissory note and the functions of each	3.23	0.79	3.31	0.74	2.95	0.99
125. Compare features of different types of loans	3.27	0.81	3.19	1.00	3.02	1.02
126. Explain the role of credit and the impact of long-term and short-term credit	3.35	0.77	3.53	0.76	3.34	0.71
127. Understand the concept of credit costs	3.36	0.80	3.50	0.72	3.34	0.68
128. Understand the concept of present value theory	2.70	0.95	2.94	0.84	2.93	0.96
129. Develop budgets	3.45	0.70	3.59	0.67	3.34	0.81
130. Demonstrate knowledge of different types of budget processes	2.55	0.99	2.94	0.84	2.61	1.08
131. Compare the processes for securing funds	2.74	0.92	3.06	0.91	2.77	0.87
132. Explain the value of capital assets as a form of collateral	2.81	0.89	3.19	1.00	2.91	0.95
133. Identify the causes and effects of individual and corporate bankruptcy	2.81	0.93	3.10	0.94	2.73	1.00
134. Identify the characteristics of different types of insurance	3.40	0.71	3.41	0.91	2.98	1.07
135. Understand the main functions of a balance sheet	3.41	0.76	3.56	0.62	3.41	0.62
136. Understand different types of stock and bonds	2.97	0.90	3.13	0.75	3.16	0.81
137. Understand concepts related to the stock market	2.90	0.91	3.00	0.80	3.07	0.82
138. Understand the use of a proxy	2.61	0.95	2.69	1.06	2.43	1.04
139. Overall evaluation of Finance	3.23	0.77	3.41	0.76	3.30	0.67
VIII. INFORMATION PROCESSING						
141. Apply procedures to format and prepare charts, tables, and statistical data	3.36	0.82	3.66	0.70	3.21	0.80
142. Define major terms used in information processing	3.46	0.72	3.53	0.80	3.33	0.75
143. Identify components and methods of the information processing cycle	3.37	0.79	3.53	0.80	3.07	0.95
144. Identify types and characteristics of information processing hardware and software	3.41	0.76	3.44	0.84	3.00	0.94
145. Demonstrate knowledge of computer operations	3.71	0.53	3.91	0.30	3.37	0.76
146. Describe the concept of micrographics	2.67	0.94	2.97	0.86	2.33	0.90
147. Design and prepare information for computer processing	3.27	0.85	3.50	0.62	3.07	0.81
148. Demonstrate procedures used for data entry	3.50	0.71	3.31	0.86	2.93	0.88
149. Describe data storage and retrieval systems	3.38	0.74	3.31	0.86	3.07	0.83
150. Identify capabilities of computer hardware and software	3.38	0.76	3.31	0.82	3.33	0.78
151. Describe the applications of software packages	3.41	0.78	3.59	0.61	3.33	0.81
152. Describe the functions of computer operating systems	3.25	0.83	3.41	0.71	3.00	0.86
153. Identify features of database management	3.26	0.79	3.47	0.62	3.14	0.80
154. Describe the concept of desktop publishing	3.09	0.89	3.47	0.57	2.79	0.97

	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
VIII. **INFORMATION PROCESSING (cont.)**						
155. Perform machine transcription	2.66	1.00	2.88	1.04	2.02	1.23
156. Identify procedures and characteristics of programming operations and languages	2.31	1.06	2.25	1.11	1.88	1.02
157. Analyze computer-generated output	2.97	0.92	3.25	0.80	3.02	0.92
158. Overall evaluation of Information Processing	3.56	0.63	3.61	0.50	3.34	0.73
IX. **MARKETING**						
160. Identify the four "Ps'" that make up the marketing mix	3.08	0.90	3.44	0.84	3.42	0.91
161. Explain the concepts of exchange and facilitation	2.75	0.90	3.09	0.89	3.00	0.93
162. Discuss sales techniques	3.23	0.80	3.31	0.82	2.79	1.08
163. Discuss advertising techniques	3.27	0.78	3.31	0.86	2.86	1.04
164. Discuss display concepts	3.08	0.87	3.16	0.92	2.62	1.03
165. Describe merchandising	3.18	0.82	3.31	0.90	2.74	1.03
166. Describe buying	3.20	0.80	3.31	0.78	2.79	1.08
167. Distinguish between wholesaling and retailing	3.34	0.77	3.47	0.72	3.00	0.90
168. Describe the impact of credit on buying and selling	3.39	0.80	3.47	0.67	3.02	0.83
169. Identify government regulations concerning credit	3.04	0.83	3.16	0.81	2.88	0.91
170. Describe the function of market analysis	2.83	0.89	3.22	0.87	3.07	0.95
171. Describe marketing strategies	3.07	0.86	3.34	0.79	3.07	0.93
172. Describe the function of an analysis of consumer behavior	3.04	0.84	3.31	0.59	3.16	0.78
173. Define warehousing	2.68	0.87	2.75	0.98	2.33	0.97
174. Define inventory and depreciation	3.07	0.81	3.22	0.91	2.73	0.92
175. Calculate inventory figures	2.93	0.89	3.19	0.90	2.30	1.09
176. Classify goods and services	3.11	0.83	3.16	0.99	2.59	1.09
177. Describe the stages in a product life cycle	2.92	0.88	3.19	0.93	2.93	0.97
178. Describe the various channels of distribution	3.28	0.78	3.41	0.76	3.12	0.96
179. Compare marketing and production costs	3.03	0.85	3.16	0.85	2.89	1.02
180. Define the concept of a price system	2.95	0.86	3.22	0.91	3.00	0.96
181. Describe types of pricing strategies	3.04	0.87	3.09	0.96	3.02	0.93
182. Overall evaluation of Marketing	3.06	0.86	3.26	0.86	3.17	0.79
X. **OFFICE TECHNOLOGY AND PROCEDURES**						
184. Demonstrate effective keyboarding techniques	3.92	0.31	4.00	0.00	3.02	1.09
185. Demonstrate effective skills and techniques in the operation of office equipment	3.73	0.52	3.87	0.34	3.00	1.12

	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
X. OFFICE TECHNOLOGY AND PROCEDURES (cont.)						
186. Compare advantages and disadvantages of various office equipment	3.03	0.85	3.13	0.85	2.70	1.11
187. Understand the organizational relationship among work units	2.82	0.87	3.29	0.69	2.95	1.01
188. Describe the administrative services needed for office operations	2.88	0.85	3.26	0.93	2.80	1.00
189. Describe effective methods of processing mail	3.00	0.89	3.26	0.82	2.25	1.06
190. Describe procedures of records management	3.28	0.80	3.45	0.77	2.55	1.00
191. Describe the characteristics and appropriate use of different filing systems	3.20	0.81	3.26	0.82	2.52	1.13
192. Identify steps used in filing procedures	3.16	0.86	3.26	0.86	2.55	1.11
193. Identify the roles of different office workers	3.06	0.86	3.10	0.91	2.50	1.11
194. Demonstrate knowledge of office etiquette	3.54	0.70	3.48	0.77	2.98	1.02
195. Describe procedures for planning business travel and meetings	2.85	0.85	3.06	0.85	2.34	1.08
196. Apply time management techniques	3.46	0.67	3.77	0.50	3.18	0.97
197. Determine criteria to select and use appropriate equipment and software for specific office functions	3.28	0.75	3.42	0.89	2.89	0.95
198. Identify procedures needed for composing at the computer/typewriter	3.51	0.67	3.48	0.85	2.64	1.12
199. Overall evaluation of Office Technology and Procedures	3.58	0.60	3.70	0.53	2.88	1.03
XI. VOCATIONAL EDUCATION						
201. Identify major legislation which impacts vocational business education	2.78	0.97	3.22	0.83	2.56	1.12
202. Define the characteristics of a vocational business education program	3.11	0.89	3.56	0.72	2.89	1.01
203. Identify and use occupational publications	3.09	0.87	3.25	0.72	2.82	1.05
204. Explain the process of assisting students in setting career goals	3.40	0.74	3.47	0.67	3.18	0.96
205. Define the purpose for establishing advisory committees	2.86	0.90	3.47	0.57	2.56	1.03
206. Describe the components of a job search process	3.75	0.57	3.53	0.76	3.40	0.96
207. Explain the purpose of articulation among vocational business education programs	3.06	0.91	3.31	0.74	2.59	1.06
208. Overall evaluation of Vocational Education	3.31	0.78	3.29	0.78	2.95	0.90
XII. PEDAGOGY SPECIFIC TO BUSINESS EDUCATION						
210. Understand the impact of learning theories on teaching business education	3.24	0.85	3.61	0.62	3.06	1.11
211. Identify the effects of complex factors that may affect the teaching of business education	3.11	0.85	3.29	0.74	3.09	1.12
212. Identify the effects of complex factors that may effect student's learning of business education	3.23	0.79	3.29	0.74	3.19	1.08
213. Identify the steps in developing program goals	3.22	0.78	3.52	0.63	2.98	1.12
214. Describe the process of formulating student competencies	3.29	0.73	3.74	0.44	3.02	1.07
215. Develop and justify scope and sequence of topics of a business education curriculum	3.20	0.85	3.61	0.62	3.09	0.95
216. Assemble curriculum materials and resources	3.45	0.76	3.61	0.72	3.28	0.99

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	Teachers		Administrators		Teacher Educators	
	Mean	S.D.	Mean	S.D	Mean	S.D.
XII. PEDAGOGY SPECIFIC TO BUSINESS EDUCATION (cont.)						
217. Evaluate curriculum materials and resources	3.41	0.78	3.68	0.48	3.43	0.88
218. Develop lesson plans	3.66	0.68	3.56	0.67	3.17	1.05
219. Design instructional strategies using materials and resources	3.55	0.73	3.75	0.57	3.28	0.96
220. Understand the knowledge, experience, and skills that students bring to the classroom	3.29	0.80	3.44	0.76	3.13	1.01
221. Understand the knowledge, experience, and skills that students need	3.50	0.64	3.69	0.54	3.40	0.95
222. Demonstrate strategies that reflect students' learning styles	3.39	0.75	3.69	0.54	3.17	0.99
223. Demonstrate strategies to motivate and encourage students' success	3.68	0.58	3.81	0.47	3.51	0.80
224. Demonstrate effective classroom management techniques	3.80	0.51	3.78	0.42	3.36	0.92
225. Evaluate techniques to diagnose students' learning difficulties	3.26	0.83	3.48	0.68	3.04	0.91
226. Assess students' achievement in relation to students' goals	3.22	0.79	3.50	0.67	3.02	1.01
227. Evaluate program success in relation to program goals	3.32	0.75	3.45	0.68	3.09	0.95
228. Identify professional literature appropriate for business education teachers and students	2.86	0.92	3.25	0.67	2.89	0.98
229. Identify professional organizations for business education teachers and students	2.81	0.97	3.31	0.82	2.72	1.10
230. Overall evaluation of Pedagogy Specific to Business Education	3.42	0.70	3.72	0.63	3.22	1.01

Appendix G

Mean Importance Ratings:
Race/Ethnicity, Sex, Geographic Region, and Teaching Experience

	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤10 yrs	≥11 yrs
I. ACCOUNTING/BOOKKEEPING										
1. Describe the basic accounting cycle	3.72	3.66	3.75	3.64	3.90	3.68	3.67	3.62	3.71	3.75
2. Describe the principles of accounting	3.67	3.71	3.65	3.66	3.79	3.69	3.57	3.57	3.61	3.66
3. Identify steps necessary to open a set of accounting records	3.50	3.57	3.60	3.33	3.70	3.48	3.56	3.28	3.52	3.55
4. Interpret the accounting equation: assets = liabilities + equity	3.82	3.74	3.83	3.78	3.93	3.79	3.78	3.76	3.76	3.86
5. Compare accounting procedures for property tax, FICA tax, and state and federal employee income tax	2.61	2.50	2.66	2.50	2.70	2.64	2.59	2.53	2.66	2.62
6. Prepare and analyze financial statements	3.36	3.20	3.38	3.29	3.48	3.52	3.26	3.10	3.39	3.36
7. Describe and interpret combination journals	3.14	3.06	3.24	2.91	3.15	3.19	3.13	3.07	3.18	3.19
8. Understand the use of debits and credits	3.82	3.63	3.82	3.76	3.79	3.80	3.76	3.87	3.82	3.82
9. Understand the procedures for journalizing transactions	3.64	3.51	3.71	3.46	3.67	3.69	3.57	3.58	3.69	3.68
10. Describe the concept of posting	3.59	3.51	3.66	3.44	3.67	3.60	3.53	3.55	3.55	3.65
11. Describe and interpret subsidiary ledgers	3.29	3.11	3.38	3.07	3.42	3.36	3.22	3.07	3.24	3.34
12. Describe the elements of a balance sheet	3.68	3.69	3.70	3.65	3.85	3.71	3.61	3.58	3.63	3.70
13. Summarize the principles of debit and credit for balance sheet accounts	3.57	3.68	3.60	3.57	3.67	3.67	3.50	3.52	3.59	3.61
14. Describe the concept of trial balance and post-closing trial balance	3.39	3.14	3.51	3.10	3.58	3.41	3.30	3.20	3.39	3.42
15. Prepare worksheets	3.40	3.29	3.53	3.15	3.54	3.35	3.34	3.42	3.39	3.47
16. Describe closing procedures/entries	3.38	3.26	3.52	3.10	3.53	3.40	3.39	3.18	3.43	3.41
17. Use source documents to journalize transactions	3.33	3.23	3.42	3.12	3.41	3.32	3.28	3.28	3.35	3.40
18. Describe the concept of tax accounting	2.33	2.31	2.33	2.32	2.52	2.33	2.25	2.25	2.27	2.33
19. Describe the concept of cost accounting	2.29	2.31	2.32	2.24	2.47	2.30	2.17	2.33	2.20	2.29
20. Explain and use computerized accounting systems	3.18	3.31	3.22	3.10	3.26	3.25	3.06	3.20	3.14	3.20
21. Use financial ratios	2.31	2.60	2.25	2.49	2.48	2.40	2.19	2.32	2.18	2.31
22. Analyze employee's weekly or monthly earnings using the payroll register, time card, etc.	3.22	3.40	3.36	3.02	3.37	3.13	3.29	3.19	3.36	3.29
23. Describe the concepts of account receivable and bad debit expense	3.06	3.17	3.11	3.00	3.22	3.11	2.99	3.00	3.10	3.13
24. Overall evaluation of Accounting/Bookkeeping	3.64	3.50	3.66	3.56	3.79	3.63	3.57	3.53	3.62	3.67
II. BUSINESS COMMUNICATION/BUSINESS ENGLISH										
26. Demonstrate standard English grammar	3.86	3.86	3.92	3.72	3.86	3.85	3.89	3.82	3.82	3.86
27. Identify appropriate placement of components in various forms of written correspondence	3.46	3.49	3.56	3.30	3.48	3.33	3.62	3.45	3.55	3.48
28. Use appropriate reference citations	3.00	3.17	3.10	2.87	3.09	2.93	3.06	3.03	2.94	3.06
29. Demonstrate skills needed to prepare outlines and manuscripts	3.19	3.31	3.27	3.10	3.33	3.17	3.11	3.30	3.06	3.25

Note: W = White; Mi = Minority; F = Female; M = Male; NE = Northeast; C = Central; S = Southern; FW = Far West

	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤10 yrs	≥11 yrs
II. BUSINESS COMMUNICATION/BUSINESS ENGLISH (cont.)										
30. Perform proofreading	3.76	3.69	3.87	3.50	3.74	3.74	3.76	3.73	3.71	3.79
31. Perform editing	3.64	3.66	3.73	3.44	3.61	3.65	3.61	3.65	3.63	3.63
32. Determine criteria to select and use appropriate services and formats to meet various communication needs	3.10	3.53	3.24	2.97	3.14	3.12	3.25	3.07	3.15	3.17
33. Demonstrate effective written communication skills	3.85	3.86	3.84	3.84	3.83	3.87	3.78	3.88	3.78	3.84
34. Demonstrate effective oral communication skills	3.75	3.89	3.79	3.72	3.76	3.76	3.84	3.67	3.65	3.78
35. Understand the impact of nonverbal communication	3.32	3.57	3.39	3.27	3.41	3.31	3.40	3.30	3.39	3.34
36. Demonstrate effective listening skills	3.72	3.82	3.77	3.66	3.76	3.74	3.76	3.68	3.67	3.74
37. Identify strategies to overcome communication barriers	3.19	3.51	3.26	3.15	3.30	3.26	3.18	3.17	3.06	3.27
38. Identify communication characteristics of diverse populations (e.g., multicultural, regional)	2.74	2.91	2.81	2.68	2.80	2.74	2.71	2.92	2.78	2.79
39. Describe the competencies needed for effective international communication	2.48	2.91	2.59	2.46	2.64	2.58	2.51	2.50	2.41	2.57
40. Describe the appropriate technologies for maintaining effective communication	3.00	3.11	3.13	2.82	3.15	2.98	2.97	3.10	3.00	3.06
41. Overall evaluation of Business Communication/Business English	3.60	3.57	3.69	3.42	3.66	3.55	3.62	3.59	3.45	3.62
III. BUSINESS LAW										
43. Describe basic principles of business law	3.43	3.41	3.45	3.38	3.59	3.46	3.31	3.38	3.39	3.45
44. Explain the role of the civil branch of law	3.26	3.24	3.28	3.25	3.46	3.37	3.01	3.28	3.20	3.31
45. Describe the United States legal system and court structure	3.23	3.32	3.31	3.18	3.51	3.23	3.16	3.19	3.18	3.33
46. Describe elements and functions of contracts	3.48	3.38	3.46	3.51	3.64	3.52	3.32	3.46	3.32	3.51
47. Describe types of contracts	3.32	3.24	3.33	3.30	3.51	3.36	3.16	3.27	3.30	3.32
48. Identify requirements that make a contract enforceable	3.44	3.47	3.46	3.46	3.60	3.46	3.33	3.47	3.38	3.48
49. Describe the methods of discharging contracts (e.g., performance, agreement)	3.20	3.15	3.23	3.18	3.42	3.25	3.01	3.22	3.12	3.23
50. Identify legal aspects of a bailment	2.72	2.68	2.79	2.58	2.85	2.84	2.55	2.68	2.68	2.78
51. Define and differentiate between ownership and tenancy	2.97	3.06	3.08	2.83	3.12	3.10	2.84	2.97	2.80	3.06
52. Define agent and principal	3.06	3.26	3.13	3.01	3.21	3.10	3.01	3.10	2.92	3.11
53. Define creditor and debtor	3.30	3.53	3.40	3.21	3.42	3.36	3.30	3.31	3.28	3.34
54. Describe a consignment	2.87	3.03	3.03	2.64	2.97	2.94	2.83	2.88	2.82	2.96
55. Describe the functions and requirements of negotiations	2.90	3.00	2.99	2.80	2.96	3.01	2.77	2.97	2.90	2.93
56. Describe a negotiable instrument	3.27	3.38	3.33	3.22	3.32	3.40	3.17	3.27	3.10	3.35
57. Describe the types, functions, and characteristics of tort law (e.g., conversion, trespass)	3.04	2.91	3.02	3.04	3.07	3.18	2.82	3.08	2.94	3.08
58. Distinguish between the law of torts and the law of crimes	3.19	3.06	3.14	3.24	3.27	3.29	2.99	3.16	3.12	3.23
59. Describe the function and characteristic of statutory law	3.01	2.91	3.02	3.00	3.12	3.14	2.78	3.02	2.92	3.07

Note: W = White; Mi = Minority; F = Female; M = Male; NE = Northeast; C = Central; S = Southern; FW = Far West

	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤10 yrs	≥11 yrs
III. BUSINESS LAW (cont.)										
60. Describe the function of bankruptcy	3.03	3.06	3.10	2.90	3.18	3.05	2.94	2.98	2.96	3.05
61. Understand different regulations that protect consumers	3.19	3.18	3.26	3.07	3.28	3.15	3.13	3.24	3.24	3.22
62. Describe the concept of discrimination	3.22	3.29	3.29	3.13	3.37	3.21	3.12	3.27	3.22	3.24
63. Discuss the role of different federal agencies (e.g., FTC, EPA, FDA, OSHA) in regulating business	2.82	2.79	2.92	2.70	2.88	2.80	2.82	2.90	2.88	2.83
64. Describe different types of wills	2.65	2.74	2.84	2.33	2.78	2.70	2.61	2.62	2.60	2.75
65. Overall evaluation of Business Law	3.21	3.38	3.26	3.20	3.33	3.30	3.14	3.23	3.12	3.27
IV. BUSINESS MATH										
67. Perform basic computational functions (e.g., addition, subtraction, multiplication, division)	3.96	3.91	3.97	3.92	4.00	3.93	3.95	3.95	3.92	3.97
68. Perform basic computational functions using decimals and fractions	3.92	3.86	3.93	3.88	3.99	3.91	3.92	3.84	3.82	3.94
69. Explain basic statistical concepts (e.g., mean, standard deviation)	2.80	2.91	2.78	2.88	2.80	2.79	2.90	2.72	2.94	2.71
70. Calculate percentages and ratios	3.60	3.63	3.62	3.63	3.60	3.66	3.68	3.51	3.53	3.61
71. Calculate interest rates (e.g., simple and compound)	3.67	3.66	3.65	3.74	3.75	3.73	3.64	3.59	3.61	3.67
72. Calculate cash discounts and trade discounts	3.58	3.63	3.63	3.50	3.69	3.56	3.59	3.54	3.45	3.63
73. Understand methods of charging interest (add-on interest, note discounting)	3.43	3.49	3.46	3.41	3.53	3.47	3.44	3.39	3.31	3.50
74. Overall evaluation of Business Math	3.62	3.71	3.67	3.60	3.77	3.64	3.69	3.47	3.57	3.63
V. BUSINESS ORGANIZATION AND MANAGEMENT										
76. Identify major forms of business organizations (e.g., corporation, partnership, sole proprietorship, cooperative)	3.68	3.59	3.63	3.74	3.83	3.75	3.50	3.63	3.69	3.64
77. Describe the role of entrepreneurship	3.51	3.50	3.50	3.54	3.74	3.53	3.33	3.54	3.65	3.49
78. Describe the form and function of business plans	3.04	3.21	3.04	3.11	3.31	3.10	2.80	3.19	3.06	3.03
79. Identify the roles and implications of governmental regulations in business	3.09	3.15	3.12	3.07	3.32	3.08	2.94	3.18	3.02	3.10
80. Understand organizational structure and principles	3.08	3.24	3.13	3.04	3.28	3.04	3.03	3.09	3.19	3.06
81. Explain managerial functions (e.g., planning, organizing, leading, and controlling a business enterprise)	3.28	3.35	3.27	3.31	3.42	3.36	3.17	3.20	3.46	3.18
82. Understand different strategies of management	3.02	3.15	3.04	3.02	3.25	3.16	2.83	2.96	3.13	3.01
83. Describe management information systems	2.93	3.06	2.95	2.97	2.98	3.09	2.85	2.91	2.94	2.94
84. Discuss the concepts of managerial decision-making	3.05	3.24	3.07	3.06	3.17	3.16	2.87	3.09	3.06	3.03
85. Understand the importance of accountability and ethics	3.51	3.35	3.48	3.48	3.55	3.54	3.37	3.48	3.46	3.46
86. Discuss the concept of labor-management relations	3.06	3.06	3.08	3.04	3.23	3.15	2.88	3.04	3.00	3.08
87. Discuss the concept of human resource planning	3.11	3.24	3.17	3.07	3.25	3.11	3.05	3.18	3.06	3.14
88. Overall evaluation of Business Organization and Management	3.20	3.41	3.24	3.19	3.31	3.27	3.16	3.17	3.25	3.18

Note: W = White; Mi = Minority; F = Female; M = Male; NE = Northeast; C = Central; S = Southern; FW = Far West

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	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤ 10 yrs	≥ 11 yrs
VI. ECONOMICS										
90. Describe basic economic principles and theories as they relate to business	3.49	3.45	3.50	3.46	3.67	3.49	3.47	3.27	3.38	3.49
91. Describe the fundamental factors operating in micro-economic analysis	2.95	2.91	2.91	3.01	3.10	2.91	2.85	2.96	2.96	2.89
92. Describe the fundamental factors operating in macro-economic analysis	2.93	2.91	2.87	3.02	3.15	2.88	2.80	2.95	2.91	2.89
93. Describe economic effects of inflation and deflation	3.46	3.55	3.43	3.54	3.64	3.49	3.39	3.33	3.35	3.48
94. Define consumer price index	3.16	3.42	3.22	3.16	3.41	3.10	3.21	3.04	3.10	3.20
95. Understand the concepts of supply and demand and equilibrium price and quantity	3.46	3.64	3.45	3.53	3.66	3.47	3.40	3.36	3.48	3.43
96. Understand the difference between elastic demand and inelastic demand and their effects on revenue	2.96	3.24	2.99	3.00	3.21	2.95	2.95	2.91	2.98	2.95
97. Describe and interpret the tools of economic analysis (e.g., tables, charts)	2.98	3.00	3.01	2.94	3.08	2.99	2.89	3.02	3.00	2.98
98. Describe different types of market structure (e.g., monopoly, oligopoly, monopsony)	3.03	3.00	3.02	3.02	3.19	3.07	2.75	3.20	3.06	3.00
99. Describe different types of economic systems	3.27	3.33	3.28	3.24	3.40	3.21	3.13	3.45	3.23	3.31
100. Contrast roles of individuals, business firms, and governments in different economic systems	3.13	3.12	3.11	3.17	3.29	3.16	2.93	3.25	3.08	3.13
101. Identify characteristics of free enterprise and the role of business in it	3.51	3.55	3.51	3.49	3.59	3.53	3.39	3.55	3.38	3.53
102. Describe the economic effects of fiscal and monetary policy	2.98	3.09	2.94	3.08	3.22	2.97	2.83	3.05	2.79	3.01
103. Understand the elements of Gross National Product (GNP)	3.24	3.39	3.28	3.19	3.47	3.25	3.13	3.18	3.04	3.30
104. Describe the difference between personal income, gross income, and disposable income	3.48	3.58	3.52	3.43	3.70	3.48	3.36	3.46	3.50	3.50
105. Understand different types of taxation and the principles they are based on	3.21	3.12	3.18	3.23	3.41	3.18	3.11	3.13	3.06	3.23
106. Define balance of trade	3.05	3.09	3.06	3.04	3.23	3.05	2.90	3.09	2.94	3.07
107. Describe the role of the consumer in the economy	3.58	3.61	3.60	3.57	3.69	3.55	3.49	3.62	3.51	3.60
108. Describe the role of the producer in the economy	3.50	3.64	3.55	3.47	3.65	3.48	3.43	3.55	3.45	3.52
109. Identify economic resources	3.28	3.55	3.34	3.27	3.54	3.30	3.15	3.32	3.27	3.34
110. Demonstrate an understanding of global economy	3.16	3.36	3.17	3.20	3.32	3.15	3.07	3.25	2.94	3.23
111. Identify the effects of international trade on the United States economy	3.23	3.33	3.23	3.28	3.34	3.23	3.16	3.31	3.08	3.29
112. Understand the profit maximizing rule and the break-even point	3.04	3.12	3.00	3.15	3.20	3.06	2.98	3.04	2.84	3.05
113. Overall evaluation of Economics	3.37	3.58	3.34	3.38	3.43	3.30	3.33	3.37	3.19	3.35
VII. FINANCE										
115. Describe the structure of the United States banking system, including the Federal Reserve System	3.18	3.18	3.16	3.22	3.39	3.21	3.10	3.02	3.10	3.15
116. Identify types of financial institutions and their roles in providing services in the area of transfer funds, credit, etc.	3.18	3.18	3.19	3.17	3.30	3.25	3.19	2.95	3.08	3.16
117. Identify types of saving and investment institutions	3.24	3.21	3.24	3.25	3.33	3.31	3.22	3.09	3.25	3.24
118. Distinguish between types of investments	3.20	3.18	3.16	3.28	3.28	3.26	3.14	3.14	3.15	3.21
119. Distinguish between debt and equity	3.33	3.45	3.32	3.44	3.48	3.36	3.27	3.35	3.21	3.35

Note: W = White; Mi = Minority; F = Female; M = Male; NE = Northeast; C = Central; S = Southern; FW = Far West

	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤10 yrs	≥11 yrs
VII. FINANCE (cont.)										
120. Explain types of services provided by financial institutions	3.23	3.19	3.23	3.21	3.38	3.16	3.22	3.16	3.23	3.26
121. Identify the steps to reconcile a bank statement	3.73	3.47	3.79	3.57	3.83	3.67	3.70	3.63	3.79	3.77
122. Distinguish between a checking account and a savings account	3.63	3.50	3.73	3.43	3.70	3.61	3.58	3.60	3.69	3.71
123. Demonstrate correct procedures for preparing a check	3.69	3.47	3.78	3.49	3.78	3.69	3.64	3.58	3.81	3.74
124. Identify the parts of a promissory note and the functions of each	3.21	3.22	3.32	3.05	3.38	3.25	3.19	3.07	3.06	3.28
125. Compare features of different types of loans	3.22	3.34	3.28	3.16	3.41	3.15	3.25	3.18	3.17	3.27
126. Explain the role of credit and the impact of long-term and short-term credit	3.37	3.41	3.37	3.41	3.53	3.38	3.30	3.39	3.33	3.40
127. Understand the concept of credit costs	3.39	3.28	3.39	3.40	3.50	3.36	3.30	3.42	3.31	3.41
128. Understand the concept of present value theory	2.78	2.97	2.79	2.83	2.98	2.66	2.82	2.84	2.63	2.80
129. Develop budgets	3.45	3.50	3.50	3.39	3.66	3.40	3.42	3.40	3.46	3.47
130. Demonstrate knowledge of different types of budget processes (e.g., continuous, annual, zero-base budgeting)	2.62	2.94	2.65	2.64	2.76	2.54	2.65	2.74	2.46	2.67
131. Compare the processes for securing funds for proprietorship, partnership, corporation, and a cooperative	2.80	2.90	2.81	2.82	2.90	2.79	2.80	2.81	2.74	2.82
132. Explain the value of capital assets as a form of collateral	2.86	3.13	2.94	2.81	2.97	2.86	2.86	2.93	2.75	2.93
133. Identify the causes and effects of individual and corporate bankruptcy	2.85	2.94	2.89	2.77	3.02	2.73	2.86	2.84	2.77	2.87
134. Identify the characteristics of different types of insurance (e.g., life, health, home automobile)	3.33	3.34	3.37	3.30	3.42	3.34	3.37	3.23	3.33	3.39
135. Understand the main functions of a balance sheet	3.43	3.50	3.48	3.39	3.52	3.51	3.40	3.30	3.35	3.45
136. Understand different types of stock and bonds and the risks involved in each	3.03	3.06	2.97	3.16	3.11	3.11	2.98	2.96	2.98	3.05
137. Understand concepts related to the stock market	2.97	2.97	2.90	3.09	3.11	3.01	2.90	2.86	2.94	2.96
138. Understand the use of a proxy	2.59	2.84	2.72	2.44	2.80	2.53	2.61	2.61	2.46	2.68
139. Overall evaluation of Finance	3.27	3.39	3.27	3.32	3.43	3.24	3.27	3.23	3.29	3.27
VIII. INFORMATION PROCESSING										
141. Apply procedures to format and prepare charts, tables, and statistical data	3.40	3.29	3.45	3.28	3.50	3.35	3.40	3.30	3.37	3.39
142. Define major terms used in information processing	3.45	3.53	3.51	3.37	3.65	3.40	3.48	3.32	3.45	3.48
143. Identify components and methods of the information processing cycle	3.32	3.56	3.44	3.19	3.48	3.27	3.40	3.29	3.27	3.41
144. Identify types and characteristics of information processing hardware and software	3.36	3.44	3.47	3.16	3.55	3.20	3.50	3.23	3.44	3.39
145. Demonstrate knowledge of computer operations	3.70	3.68	3.73	3.62	3.76	3.70	3.68	3.63	3.71	3.73
146. Describe the concept of micrographics	2.67	2.76	2.74	2.58	2.68	2.77	2.77	2.52	2.48	2.78
147. Design and prepare information for computer processing	3.28	3.26	3.32	3.21	3.20	3.29	3.35	3.30	3.18	3.33
148. Demonstrate procedures used for data entry	3.39	3.41	3.47	3.25	3.38	3.34	3.49	3.37	3.42	3.45
149. Describe data storage and retrieval systems	3.33	3.35	3.34	3.30	3.27	3.30	3.43	3.27	3.39	3.35

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	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤ 10 yrs	≥ 11 yrs
VIII. INFORMATION PROCESSING (cont.)										
150. Identify capabilities of computer hardware and software	3.37	3.38	3.40	3.31	3.44	3.27	3.46	3.32	3.47	3.37
151. Describe the applications of software packages	3.43	3.41	3.45	3.36	3.47	3.41	3.49	3.25	3.39	3.45
152. Describe the functions of computer operating systems	3.22	3.26	3.27	3.17	3.28	3.20	3.31	3.10	3.31	3.25
153. Identify features of database management	3.29	3.33	3.35	3.18	3.36	3.27	3.27	3.28	3.24	3.32
154. Describe the concept of desktop publishing	3.12	3.15	3.20	2.97	3.36	3.10	3.05	2.98	3.00	3.16
155. Perform machine transcription	2.60	2.74	2.74	2.36	2.60	2.54	2.69	2.61	2.41	2.69
156. Identify procedures and characteristics of programming operations and languages	2.21	2.59	2.30	2.19	2.17	2.25	2.46	2.08	2.29	2.30
157. Analyze computer-generated output	3.02	3.06	3.01	3.07	2.91	3.14	3.10	2.88	2.86	3.05
158. Overall evaluation of Information Processing	3.53	3.65	3.63	3.39	3.55	3.51	3.62	3.46	3.48	3.62
IX. MARKETING										
160. Identify the four "Ps'" that make up the marketing mix	3.19	3.31	3.14	3.33	3.44	3.24	3.01	3.19	3.16	3.16
161. Explain the concepts of exchange and facilitation	2.85	2.97	2.86	2.91	3.11	2.84	2.73	2.85	2.76	2.86
162. Discuss sales techniques	3.17	3.21	3.21	3.12	3.38	3.30	2.93	3.14	3.22	3.19
163. Discuss advertising techniques	3.20	3.33	3.27	3.14	3.44	3.27	3.02	3.18	3.22	3.25
164. Discuss display concepts	3.00	3.21	3.11	2.91	3.27	3.09	2.84	2.96	2.92	3.10
165. Describe merchandising	3.13	3.21	3.19	3.05	3.38	3.19	2.88	3.18	3.14	3.17
166. Describe buying	3.15	3.24	3.22	3.07	3.41	3.18	2.99	3.11	3.12	3.20
167. Distinguish between wholesaling and retailing	3.31	3.30	3.33	3.27	3.56	3.31	3.06	3.36	3.24	3.34
168. Describe the impact of credit on buying and selling	3.34	3.36	3.37	3.31	3.56	3.36	3.20	3.27	3.32	3.37
169. Identify government regulations concerning credit	3.05	3.03	3.10	2.94	3.26	3.00	2.93	3.07	2.96	3.08
170. Describe the function of market analysis	2.91	3.13	2.90	3.03	3.11	2.97	2.78	3.00	2.80	2.93
171. Describe marketing strategies	3.09	3.34	3.11	3.14	3.33	3.06	3.00	3.13	3.02	3.14
172. Describe the function of an analysis of consumer behavior	3.09	3.22	3.11	3.12	3.32	3.03	2.95	3.21	2.96	3.14
173. Define warehousing	2.64	2.81	2.81	2.40	2.92	2.61	2.56	2.63	2.50	2.71
174. Define inventory and depreciation	3.07	3.03	3.10	3.01	3.30	3.08	2.90	3.05	2.92	3.09
175. Calculate inventory figures	2.88	2.94	2.98	2.72	3.12	2.87	2.80	2.82	2.80	2.91
176. Classify goods and services	3.05	3.13	3.19	2.79	3.23	3.08	3.00	2.89	2.98	3.10
177. Describe the stages in a product life cycle	2.95	3.13	3.01	2.90	3.23	2.99	2.80	2.91	2.92	2.97
178. Describe the various channels of distribution (e.g., producer, wholesales, retailer)	3.26	3.47	3.27	3.32	3.56	3.34	3.02	3.29	3.16	3.33
179. Compare marketing and production costs	3.00	3.38	3.10	2.94	3.27	3.06	2.95	2.95	2.88	3.06

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	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤10 yrs	≥11 yrs
IX. MARKETING (cont.)										
180. Define the concept of a price system	2.98	3.26	3.05	2.96	3.23	3.04	2.90	2.91	2.84	3.01
181. Describe types of pricing strategies	3.02	3.41	3.06	3.06	3.32	3.12	2.86	2.96	2.90	3.10
182. Overall evaluation of Marketing	3.08	3.37	3.10	3.15	3.26	3.12	2.95	3.19	2.98	3.13
X. OFFICE TECHNOLOGY AND PROCEDURES										
184. Demonstrate effective keyboarding techniques	3.78	3.77	3.88	3.58	3.86	3.73	3.77	3.77	3.88	3.85
185. Demonstrate effective skills and techniques in the operation of office equipment	3.63	3.59	3.77	3.36	3.70	3.55	3.65	3.63	3.78	3.67
186. Compare advantages and disadvantages of various office equipment	2.98	3.29	3.12	2.78	3.08	2.92	3.17	2.83	3.20	2.99
187. Understand the organizational relationship among work units (e.g., organizational charts, divisions, departments)	2.90	3.17	2.97	2.82	3.06	2.94	2.87	2.85	2.88	2.91
188. Describe the administrative services needed for office operations	2.90	3.17	3.02	2.74	2.97	2.82	3.03	2.88	2.90	2.93
189. Describe effective methods of processing mail	2.90	3.06	3.10	2.55	2.95	2.80	3.12	2.78	2.75	3.00
190. Describe procedures of records management	3.21	3.18	3.33	2.94	3.25	3.12	3.26	3.22	3.08	3.25
191. Describe the characteristics and appropriate use of different filing systems (e.g., alphabetic, numeric, geographic)	3.10	3.26	3.27	2.80	3.14	3.00	3.24	3.05	3.02	3.19
192. Identify steps used in filing procedures (e.g., inspecting, sorting, coding)	3.07	3.17	3.21	2.84	3.11	2.98	3.19	3.05	3.00	3.16
193. Identify the roles of different office workers	2.95	3.29	3.13	2.70	3.03	2.89	3.13	2.88	3.02	3.02
194. Demonstrate knowledge of office etiquette	3.44	3.66	3.61	3.16	3.63	3.33	3.55	3.33	3.55	3.49
195. Describe procedures for planning business travel and meetings	2.82	2.80	2.96	2.52	3.00	2.71	2.90	2.67	2.84	2.81
196. Apply time management techniques (e.g., setting priorities, work schedules)	3.49	3.43	3.55	3.31	3.64	3.41	3.43	3.42	3.45	3.48
197. Determine criteria to select and use appropriate equipment and software for specific office functions	3.21	3.49	3.32	3.07	3.36	3.13	3.36	3.13	3.35	3.23
198. Identify procedures needed for composing at the computer/typewriter	3.38	3.34	3.50	3.10	3.45	3.33	3.42	3.28	3.53	3.40
199. Overall evaluation of Office Technology and Procedures	3.48	3.46	3.63	3.18	3.53	3.41	3.55	3.42	3.52	3.54
XI. VOCATIONAL EDUCATION										
201. Identify major legislation which impacts vocational business education	2.80	3.06	2.89	2.69	2.81	2.71	2.81	3.05	2.71	2.89
202. Define the characteristics of a vocational business education program	3.14	3.29	3.19	3.02	3.14	3.04	3.15	3.27	3.00	3.21
203. Identify and use occupational publications (e.g., Occupational Outlook Handbook, journals, periodicals)	3.05	3.25	3.12	2.94	3.11	3.08	3.10	2.92	3.10	3.09
204. Explain the process of assisting students in setting career goals	3.37	3.38	3.41	3.31	3.48	3.38	3.31	3.35	3.45	3.38
205. Define the purpose for establishing advisory committees	2.88	3.00	3.01	2.68	2.97	2.88	2.89	2.92	2.73	2.97
206. Describe the components of a job search process (e.g., letter of application, resume, interview)	3.69	3.63	3.72	3.57	3.78	3.71	3.66	3.52	3.71	3.68
207. Explain the purpose of articulation among vocational business education programs	3.02	3.23	3.16	2.77	3.03	3.03	3.09	2.97	2.96	3.08
208. Overall evaluation of Vocational Education	3.25	3.27	3.31	3.13	3.23	3.23	3.16	3.43	3.24	3.30

Note: W = White; Mi = Minority; F = Female; M = Male; NE = Northeast; C = Central; S = Southern; FW = Far West

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	Race/Ethnicity		Sex		Geographic Region				Teaching Experience	
	W	Mi	F	M	NE	C	S	FW	≤10 yrs	≥11 yrs
XII. PEDAGOGY SPECIFIC TO BUSINESS EDUCATION										
210. Understand the impact of learning theories on teaching business education	3.26	3.32	3.35	3.05	3.26	3.20	3.24	3.32	3.29	3.29
211. Identify the effects of complex factors that may affect the teaching of business education	3.14	3.32	3.24	2.95	3.08	3.09	3.11	3.29	3.10	3.16
212. Identify the effects of complex factors that may effect student's learning of business education	3.26	3.32	3.37	3.01	3.30	3.18	3.20	3.34	3.24	3.27
213. Identify the steps in developing program goals	3.20	3.35	3.30	3.04	3.26	3.30	3.09	3.25	3.20	3.25
214. Describe the process of formulating student competencies (e.g., outcomes and objectives)	3.30	3.47	3.44	3.03	3.38	3.41	3.30	3.06	3.24	3.36
215. Develop and justify scope and sequence of topics of a business education curriculum	3.23	3.32	3.31	3.13	3.32	3.26	3.26	3.13	3.22	3.27
216. Assemble curriculum materials and resources	3.48	3.29	3.58	3.20	3.56	3.39	3.52	3.32	3.53	3.44
217. Evaluate curriculum materials and resources	3.45	3.38	3.57	3.21	3.50	3.41	3.51	3.34	3.44	3.46
218. Develop lesson plans	3.56	3.74	3.78	3.16	3.65	3.51	3.60	3.50	3.71	3.60
219. Design instructional strategies using materials and resources	3.51	3.71	3.66	3.27	3.65	3.45	3.53	3.52	3.59	3.55
220. Understand the knowledge, experience, and skills that students bring to various topics in business education	3.28	3.46	3.38	3.15	3.29	3.24	3.29	3.39	3.27	3.33
221. Understand the knowledge, experience and skills that student need for various topics in business education	3.50	3.60	3.56	3.41	3.65	3.38	3.53	3.52	3.43	3.54
222. Demonstrate strategies that reflect students' learning styles	3.38	3.49	3.49	3.18	3.46	3.27	3.38	3.47	3.31	3.43
223. Demonstrate strategies to motivate and encourage students' success	3.67	3.69	3.75	3.50	3.66	3.69	3.66	3.65	3.69	3.67
224. Demonstrate effective classroom management techniques (e.g., physical structure, time on task, handling discipline)	3.73	3.74	3.82	3.59	3.78	3.71	3.69	3.79	3.88	3.75
225. Evaluate techniques to diagnose students' learning difficulties	3.23	3.45	3.37	3.05	3.35	3.17	3.26	3.33	3.22	3.28
226. Assess students' achievement in relation to students' goals	3.22	3.37	3.34	3.04	3.31	3.21	3.24	3.18	3.16	3.29
227. Evaluate program success in relation to program goals	3.31	3.40	3.43	3.06	3.41	3.25	3.32	3.27	3.22	3.36
228. Identify professional literature (e.g., journals, reference works) appropriate for business education teachers and students	2.94	2.94	3.03	2.72	3.04	2.86	3.02	2.77	2.96	2.94
229. Identify professional organizations for business education teachers and students	2.88	2.86	2.96	2.67	2.82	2.83	2.97	2.82	2.96	2.86
230. Overall evaluation of Pedagogy Specific to Business Education	3.40	3.56	3.53	3.20	3.46	3.33	3.43	3.47	3.44	3.44

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